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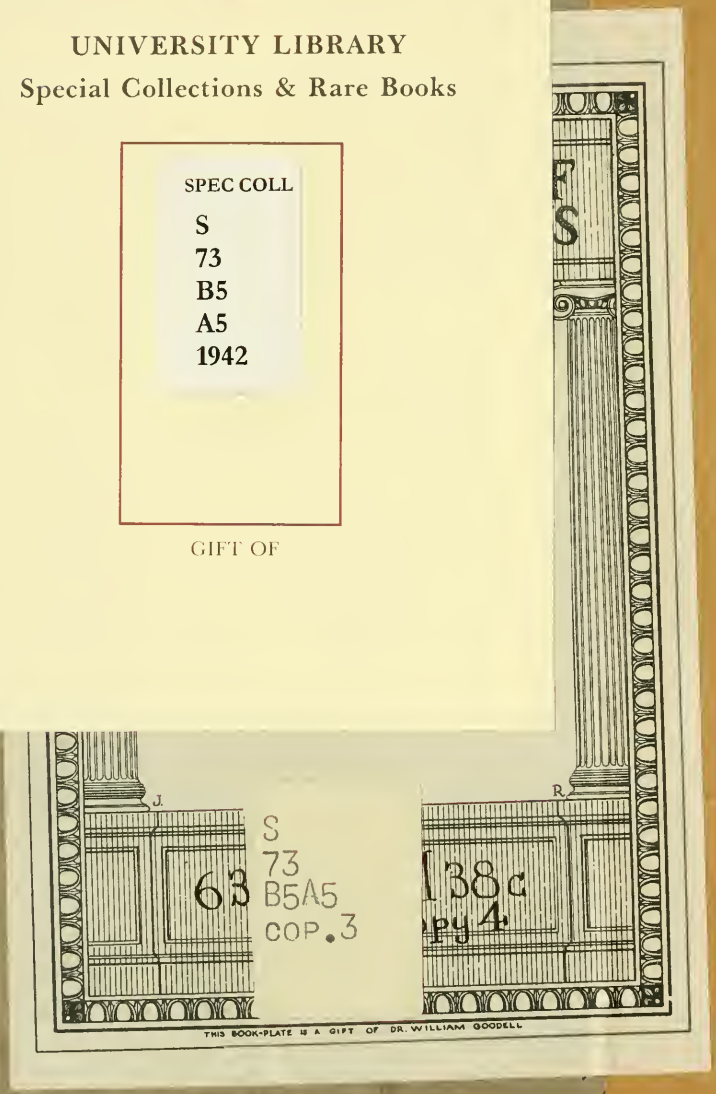

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CENTENNIAL YEAR

1792 — 1892

THE MASSACHUSETTS SOCIETY

FOR

PROMOTING AGRICULTURE

CENTENNIAL YEAR

(1792—1892)

OF

THE MASSACHUSETTS SOCIETY

FOR

PROMOTING AGRICULTURE

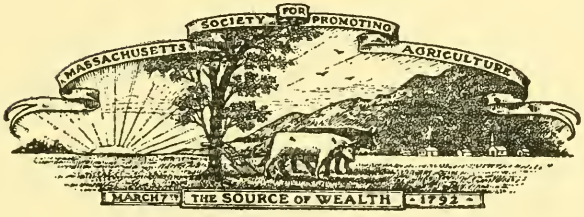
CENTENNIAL YEAR

1792 — 1892

THE MASSACHUSETTS SOCIETY

FOR

PROMOTING AGRICULTURE



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THE period of twenty or more years past has been an epoch of centennials. Nor is it yet ended. Several of an interesting character are now approaching. One is at hand, the one hundredth anniversary of the Massachusetts Society for Promoting Agriculture. It differs from those preceding in being of State rather than national prestige, but is still of high rank and dignity. The society was incorporated by an act of the Legislature passed March 7, 1792. Its long career of beneficial activity, the distinguished names borne upon its roll of membership, and its priority of date among societies of like character in this section of the country make it eminent among the State's chartered institutions and give it fame beyond the borders, a fame not exclusively its own as it pertains also to the Commonwealth. That this characterization is warranted it will be the aim of the following pages to show in a review of some of the main facts of the Society's history. Such an anniversary is necessarily retrospective in its suggestions. A summing up of past experiences will be a fitting commemoration of the old and beginning of the new century. For the society has both the resources and the disposition to pursue its mission and to avail itself of whatever opportunities the coming years shall bring for the advancement of the first and most indispensable of the useful arts.

The origin of the Society is in the following petition:

Commonwealth of Massachusetts: To the honorable the Senate and the honorable House of Repre-

sentatives, in General Court assembled, this second day of March, 1792:

The undersigned beg leave to represent that agriculture has in all civilized nations been ranked among the first objects of their attention; that different climates produce different soils and different kinds of manure, which has made a different cultivation important. Hence it is that the beneficial effects of the best writers on the subject of agriculture have been exceedingly limited. In consequence hereof it has been found necessary, not only among the nations of Europe, but among the United States and the British colonies in America, to establish under the sanction of law, agricultural societies, whose particular business is to make experiments themselves and invite others thereto on the subject of agriculture; and means have been found by which monies have been placed in their hands, which has put it in their power to give handsome premiums to the men of enterprise who have by their inquiries made useful discoveries and communicated them to the public.

The undersigned beg leave farther most respectfully to represent that from the fullest conviction of the utility of such an institution in this Commonwealth they are willing to undertake the burden of being members thereof, if the General Court shall think proper to vest in them and their associates corporate powers, competent to embrace all the purposes which may be derived from such an institution. And as in duty bound shall pray:

	B. Lincoln
S. Holten	J. Lowell
Moses Gill	M. Brimmer
Azor Orne	Benj. Guild
Edw^{d} Cutts	Aaron Dexter
Thomas Russell	Cotton Tufts
Thomas Durfee	Sam'l Adams

John Avery Jr.
Joseph Barrell
Sa: Salisbury
Chas Vaughan
Chas Bulfinch
Ja: Sullivan
Sam'l Phillips
C. Gore
Jona. Mason Jun^{r}
Jona^{n} Mason
Henry Hill
D. Sears
John Codman
Stephen Higginson
Thomas L. Winthrop

The act of incorporation bore the signature of John Hancock as governor of the Commonwealth. In it the petitioners were named as the corporators in alphabetical order, Samuel Adams being at the head of the list. The final clause of the act is as follows:

That the place of holding the first meeting of the said society shall be in the town of Boston; and that Samuel Adams, Esq., be, and he hereby is authorised and empowered to fix the time for holding the said meeting, and to notify the same to the members of the said society, by causing the same to be published in one of the Boston newspapers, fourteen days before the time fixed for holding the said meeting.

Mr. Adams, mindful it may be surmised, of the desirability of beginning on a propitious day, named April 19, following. The meeting was held accordingly in the Council Chamber of the State House, the same in which, as declared by John Adams, "the child, Independence, was born," and the same where Samuel Adams had demanded of Governor Gage "the removal of both regiments," in air and attitude as the artist has represented him in Boston's familiar statue. The only business done at this meeting of April 19 was to take the first step in organization, by electing John Avery, Jr. secretary of the society *pro tem.* The organization was completed at an adjourned meeting of June 14, 1792.

The dates given are important as marking the beginning of whatever has since been done in Massachusetts by societies or official boards for the promotion of agriculture. Here on March 2, March 7, April 19 and June 14 the primary impulse was given, which, within the next 27 years, was manifest in the formation of eight other agricultural societies in the State. Previously to 1852 seven more were organized and in that year the Board of Agriculture of the State was established.*

These organizations and those of the various town clubs and societies were but copies of the original instance, the method and operation of which were more and more seen to be of indisputable utility.. It may be remarked that the society is not only prior in date to all others in the State, but, as a corporation, to all others in the United States. In New York and Pennsylvania, and possibly in one of the more Southern states, societies had been formed a few years earlier, the first in 1785.† In the Canadian provinces one, or possibly two, existed. The petition alludes to these, and, in the same connection, to European societies. They were but few in number. Britain appears to have had but two, the Dublin society, which is stated to have had "but small influence for many years," and the Highland society in Scotland, which was incorporated in 1787. The British Board of Agriculture was not established till 1793. It is noticeable that the

* The dates are as follows: Middlesex Society, 1794; Sturbridge society, 1799; Kennebec, 1800; Berkshire, 1811; Essex, 1818; Worcester, 1818; Hampshire, Franklin and Hampden Society, 1818; Plymouth, 1819; Bristol, 1823; Barnstable, 1844; Hampden county society, 1844; Housatonic, 1848; Norfolk, 1849; Hampshire and Franklin society, 1850; Worcester West society, 1851. All but one or two of these were organized as corporations.

† Philadelphia Society for Promoting Agriculture, Feb. 11, 1785. Agricultural Society of South Carolina, Aug. 24, 1785.

fathers of the Massachusetts society disclaim in their petition any pretence as originators; but their praise is that they were in the world's front rank as "advanced thinkers" on the important subject for promoting which they organized, and, as respects public opinion, they were, as one of the later official publications of the society declares, "ahead of the age."

Two names are at once recognizable in the list of petitioners as of the highest distinction and of national renown, Samuel Adams, "the father of the Revolution," and Benjamin Lincoln, the companion in arms and personal friend of Washington. If the shadows of forgetfulness have in varying measure crept over the others it is fitting that, for the present occasion, they be singled out from the long roll of one hundred years, as pre-eminent, the fathers and founders, the brethren *ab urbe condita*.

John Avery, Jr., the first secretary of the society, was at the time of its organization also the secretary of the Commonwealth. He was of the Truro family of that name; born in 1739; graduate of Harvard, 1759; secretary of State from the adoption of the constitution in 1780 to his decease in 1806. He does not appear to have been a practical agriculturalist, but engaged in a subordinate way in the form of "ventures" in commerce.

Thomas Russell, the first president of the society, was one of the foremost, busiest and most prosperous citizens of Boston. He was born in 1740; died in 1796; represented Boston in the General Court, and the constitutional convention of 1788; was member of the governor's council during the next three years. He was the first president not only of this society but of the Massachusetts Bank, when it was organized in

1784; of the United States branch Bank at its organization, in 1792, and of the Charles river bridge corporation in 1785. He lived on one of the finest estates in Boston, fronting on Summer street, with the mansion standing at the present northerly part of Otis street, near Winthrop square. He had a farm of 53 acres, part of which was in Charlestown and part in Cambridge, and at one time he owned the Craigie estate in Cambridge, now familiarly known as the home of Longfellow. When in 1784 (the war being ended) the Continental congress decided to sell on the stocks the new 74 gun frigate, the first ever built in Boston, he was appointed as the agent to conduct the sale. When the frigate Constitution was launched in 1797, though he was no longer living, it was deemed worth the while to make record that the bottle of Madeira wine, with which the ship was christened, came from the cellar of Thomas Russell.

Joseph Barrell (1739-1804) was a leading merchant. He had a store on the town dock near Faneuil Hall, and sold West India and other foreign goods. He was first on the list of directors of the United States Bank, and the pioneer in opening the Northwest coast trade. His ships, the Washington and the Columbia, were the first to round Cape Horn in that enterprise, and the latter was the first vessel that ever crossed the bar of the Columbia river in Oregon, whence the river gets its name. He, also, had a fine estate on Summer street, which he improved by filling up the bog in the rear, which had existed from the beginning, near what is now Franklin street, and laid out a garden and fish pond. In 1792 he built a brick mansion at Charlestown (now Somerville) on the premises now known as the McLean Asylum, where he owned 170 acres of land. The building is in use to

this day, and in some of its interior construction is regarded as elegant according to present standards. He introduced the tautog fish into Boston bay.

MARTIN BRIMMER (1742-1804) was a prosperous merchant of Boston. He appears not to have held any public office. He had an estate of 40 acres in Roxbury on or near the borders of Jamaica Pond. This was his place of residence throughout the year and no doubt he was, in a very just sense, a "practical farmer."

CHARLES BULFINCH (1763-1844) graduated at Harvard in 1781; afterwards visited Europe for study and established himself as architect in Boston in 1786. Many notable buildings of Boston were planned by him, including the State House, the original City Hall, and the "Tontine buildings," so called, famous mansions in their day and whose outline in the ground plan gives the present crescent form to Franklin street. He was architect of the Capitol at Washington, as originally constructed, from 1817 to its completion in 1830.

JOHN CODMAN (1755-1803) was a prominent merchant. He was born in Charlestown, where his father had a farm. He was a director of the United States Bank. When in 1798 war with France was imminent, he, with other Boston merchants, built a frigate and presented it to the United States government, his subscription being $3,000. He was a member of the lower branch of the General Court three years and twice was chosen a senator.

EDWARD CUTTS (1728-1818) was a prominent lawyer and judge in Kittery, then in this state, now in Maine. He had agricultural interests there. He was a senator in the General Court three years and member of the governor's council, nine years.

AARON DEXTER (1750-1829) graduated at Harvard

in1776. He was a ship's surgeon in the Revolutionary war and was captured by the British. He also served in the army called out to suppress Shay's rebellion. He was professor in chemistry and materia medica at the college for many years and later was president of the Middlesex Canal corporation and prominent in various societies. He owned a farm in Chelsea where the Marine Hospital now is.

Thomas Durfee (1721-1796) was born in Tiverton now Fall River. He had a farm of 750 acres there. He was a representative of the town several years, senator 13 years, of the governor's council six years, a judge in Bristol county, member of the constitutional convention of 1788, an active patriot in the Revolution and personal friend of Lafayette.

Moses Gill (1733-1800) was born in Charlestown and resided in Princeton, and was a farmer there. He was a member of the provincial congress of 1774, senator in 1789, lieutenant governor in 1794 and acting governor from June 1799 to May 1800.

Christopher Gore (1758-1827) was the son of an opulent Boston merchant; graduate of Harvard College in 1776, appointed by Washington the first district attorney of Massachusetts; commissioner in England to settle treaty claims in 1796; *charge d'affaires* in London in 1803; governor of Massachusetts in 1809; at different times member of both branches of the Legislature; senator in Congress from 1813 to 1816; donor of $100,000 to Harvard College. Gore Hall is at Cambridge named in his honor.

Benjamin Guild (1749-1792) was a graduate of Harvard in 1769; tutor there from 1776 to 1780; a preacher for a while; kept a book store in Cornhill; married Col. Josiah Quincy's daughter.

Stephen Higginson (1743-1828) was born in

Salem, and was a merchant there; when in London 1774-5 he was called to the bar of the House of Commons and questioned as to the state of things in Massachusetts; he was delegate to the Continental Congress in 1782 and 1783; served as lieutenant colonel in suppressing Shay's rebellion and was an active adviser of Gov. Bowdoin in that crisis.

Henry Hill was a Boston merchant; died in 1828; lived in a fine mansion on Summer street; was representative in the General Court in 1776 and 1789 and one of the overseers of the poor of the town of Boston. He had a store at some central situation where in 1798 certain seed wheat received from foreign ports was distributed to the trustees of the society.

Samuel Holten (1738-1816) whose name is also spelled "Holton," was of Danvers; an eminent physician and zealous patriot; member of the provincial congress, 1774-5; delegate to organize the Confederation; member of Congress, six years; of the governor's council, 27 years, and of the constitutional convention of 1789; also judge of probate and common pleas.

John Lowell (1743-1802) was born in Newburyport and represented that town in the provincial congress; represented Boston in the Legislature in 1778; was in the convention of 1780 and secured the insertion in the bill of rights of the declaration that all men are born free and equal, expressing opinion that it would abolish slavery in the State. His legal foresight was vindicated, for when a test case arose it was so adjudicated by the highest State court. He was a member of the Continental Congress in 1782 and 1783, and became successively, judge of the United States District and Admiralty Court for the district of Massachusetts, and circuit-court judge for the New England states. He owned and lived on a large farm

in Roxbury, lying between the present Centre and Old Heath streets.

JONATHAN MASON, SEN. was a merchant in Boston, a selectman of the town of Boston, member of both branches of the Legislature and of the governor's council. He was a deacon of the Old South church; deceased in 1798.

JONATHAN MASON, JR. (1752-1831) was a lawyer; graduate of Princeton College; member of both branches of the Legislature, representing Boston; member of the governor's council; member of Congress in the Senate from 1800 to 1803 and in the House during two terms. He owned a large farm in Brookline.

AZOR ORNE (1731-1799) lived in Marblehead; was a member of the provincial and continental congresses, major-general of militia in 1775 and 1776, member of both branches of the Legislature and of the conventions of 1780 and 1788.

SAMUEL PHILLIPS (1751-1802) was a graduate of Harvard in 1771; a member of the provincial congress and the constitutional convention; a member of the State senate, representing Essex, twenty years, and its president from 1786 to 1801, and lieutenant governor in 1801 and 1802. He founded Phillips Academy in Andover.

SAMUEL SALISBURY (1739-1818) was a prominent merchant of Boston; deacon of the Old South church, and lived in a fine mansion on Summer street about opposite to Hawley street.

DAVID SEARS (1752-1816) was a wealthy merchant in Boston; a patriot of the Revolution; owned and fitted out a privateer in 1779; was chairman of the committee of merchants who built a frigate in 1798 as a gift to the national government, his subscription

to that end being $3,000; a director of the United States Bank, and owner of territory thirty miles square in Maine, which includes the present towns of Searsport and Searsmont.

James Sullivan (1744-1808) was a brother of Gen. Sullivan of the army of the Revolution; a lawyer by profession and an extensive farmer in York county, now in Maine; a member of the provincial congress; of the convention of 1780; of the Continental Congress in 1784-5; judge of the superior and probate courts, and governor of Massachusetts in 1807 and 1808. He was the king's attorney in York county and later attorney general of the State of Massachusetts, and held rank as a writer on legal, political and historical subjects.

Cotton Tufts (1734-1815) was born in Medford and resided and practiced as a physician in Weymouth. He prepared the stamp act resolutions of that town in 1765; represented the town in the General Court and was president of the Massachusetts Medical Society.

Charles Vaughan (1759-1839) was a prominent merchant in Boston for a considerable period. He was a brother-in-law of Charles Bulfinch, shared in the Tontine Building enterprise, and was an energetic and persevering man in whatever he undertook. He was a trustee of the Society as it was originally organized and was not absent from any of the monthly meetings of the board, excepting twice or thrice, until his resignation and removal from Boston in 1799. He was a large land owner at Hallowell, then in this State, and built wharves, warehouses, dwellings and mills there immediately upon his removal thither, and also partly built a town on the river below Bath. These enterprises proved on the whole to be unprofitable, but he

prospered as a farmer in the town of Hallowell and is recorded as having been a promoter of schools and agriculture there.

THOMAS L. WINTHROP (1760-1841) graduated at Harvard in 1780, was state senator and lieutenant governor from 1826 to 1833 and president of the Massachusetts Historical Society, of the American Antiquarian Society and of the Massachusetts Society for Promoting Agriculture.

Soon after the organization of the Society large additions were made to the list by admission of new members, comprising names not less eminent. Among these were John Hancock, John Adams, Fisher Ames, Nathaniel Gorham, Robert Treat Paine, Nathan Dane, Timothy Pickering, James Bowdoin, Increase Sumner, Caleb Strong, Elbridge Gerry, Gen. Henry Knox, Gen. William Heath, Gen. John Brooks, Gen. Artemas Ward, Rev. Manasseh Cutler, Rev. J. T. Kirkland, Rev. William Emerson, Rev. J. S. Buckminster, Levi Lincoln, Loammi Baldwin, Josiah Quincy, Israel Thorndike, George Cabot, Theodore Lyman, James Warren of Plymouth. The list might easily be extended by adding other contemporary and more modern names, which would in like manner be significant of the character of the membership. Those cited, which mostly or wholly may be found on the pages of the recognized text books of history, will warrant at once a presumption, of which the record gives proof, that from the start the society exerted a wide and effective influence.

A study of the circumstances amidst which the society began its work brings conviction that those concerned in it were prompted by sentiments of patriotism and philanthropy. Their method of philan-

thropy did not intend the bestowment of a dole, but the uplifting to a better self-help of the then chief industrial class of the community, comprising the bulk of the population. The patriotism of the movement may be judged to have had a two-fold relation; first a desire that the new nation should keep pace with the old father-lands in applications of the useful arts and, secondly, an aim to reach a right solution, through the way of practical wisdom, of the pressing economic questions of the hour. There were no party questions involved. Leading men of both parties were in the movement. Discontent prevailed, especially in the middle and western parts of the State, which had but lately culminated in insurrection, and all over the State there was poverty from the pinch of which few were wholly exempt, and which in many cases approached to destitution. It was easy to rail at the government and demand less taxes and legislation to shift from particular classes a due share of the burden; and it must have been evident to men of the type of those above enumerated that the only solution was in a resort to the primary sources of wealth, that then most generally available being the cultivation of the soil.

The long war of the Revolution had dissipated the accumulations of former times not only by direct destruction of property but by onerous though unavoidable taxation and the cutting off of various profitable industries, possible only in times of peace, so that the people had been spending not earnings but savings; and besides all was an enormous depreciation of legal-tender values. Farmers might well complain of hard times, when, as in one instance of record, which illustrates the general experience, a farmer sold a cow in the spring for $40 in continental money, but in the

fall could make the sum go no farther than to buy a goose for his Thanksgiving dinner.

Some appeal to patriotism with reference to State interests may have been prompted by a movement which began in 1788 for settlement of the Ohio Territory. Nothing of record shows this to have been the case, but it is at least probable that it was felt, that, to compete successfully with the fertile West, and so retain at home the most vigorous and ambitious of the farming population, the art of agriculture must be fostered and advanced in every practicable way.

But the prevalent poverty was not the only adverse circumstance. The low condition of the agricultural art was another. Farming in the old way, when each year added tracts of rich virgin soil by the clearing of forests, was no longer possible. No method of adequately restoring the exhausted soil appears to have been generally practiced or even known. It was about this time that occurred those instances referred to in the first report of the State Board of Agriculture, in which barns were removed to get them conveniently away from the accumulated heaps of manure, which heaps were regarded simply as a nuisance. The plough of the period was a clumsy structure of wood, having here or there a cutting projection of iron and a strip of iron-facing where the most wear came. All tools were heavy and cumbrous, strength being gained by increasing the weight of iron, and the use of steel being restricted to the maintenance of a cutting edge where that was indispensable. Four-wheeled farm vehicles were unknown. Seeds were sown, orchards pruned and fire wood and timber cut with regard to the phases of the moon and the contingency of the new moon's lying upon its back or standing upon its horn. With fire places everywhere in use, suited to produce and

handle with facility the largest quantity of ashes, its value as a fertilizer was unknown and its use confined to the annual household leach. To plough shallow was the only rule, lest the manure spread on the surface (the moving of barns noted above being exceptional) should be carried below the reach of the roots of corn and vine and there be soaked down to unknown depths and lost. Neither neat cattle, horses or swine could be said to be of any breed, being the progeny of creatures brought by the first settlers, originally good no doubt, according to the standard of that early day, and still showing by chance here and there a meritorious specimen. Cattle were left over night in the pastures far into the autumn and sometimes were exposed to wintry blasts that they might "toughen." The use of salt in curing hay, rotation in crops, the ploughing in of green crops were unknown. Fruit cultivation among the generality of farmers was restricted pretty closely to the production of cider apples. As late as 1823 the president of the Society officially lamented that farmers still continued the practice "of slicing up summer apples and suspending them in front of the house to dry that they might have a comparatively insipid and tasteless provision for winter," and he declared that, "till every farmer can lay up ten barrels of excellent winter apples, for his own use, we shall not expect much progress in other branches of gardening."

Manifestly there was a field for missionary work such as the new society proposed to engage in. They had encouragement in the fact that important and satisfactory results had followed from like endeavors of recent date in foreign lands, but they had also the discouragements which usually attend such work at the start in the inertia of conservatism of that moss-

grown sort that prefers the old ways. The mass of farmers of that period lacked the quick intelligence that success in their occupation requires. Probably the instruction of the common schools had been but a feeble affair during the preceding seventeen years. But had all been disposed to read and experiment there were no guides and no text books. Neither in this country or Great Britain, in 1792, had any newspaper or magazine devoted to agriculture been issued, and as respects the latter country there is the best authority for saying, that "the first systematic work on agriculture that really advanced the art" did not appear till 1805.

Progress was slow in the society's enterprise at first. In the rural tavern talk the members were held to be mere "theoretical farmers," in contrast with the only desirable sort, the "practical farmers;" and it was not long before the more trenchant term of "gentlemen farmers," was applied to the innovators. Some of the early publications of the Society were condemned as containing articles "above the capacity of common farmers." Even as late as the date of the first public exhibition, or "cattle fair," of the society one in this frame of mind complimented the managers of the ploughing match upon "the speed of their oxen," the sarcasm being in a levelling down of the competition to the then accepted opinion as to the utility of horse racing.

To these various criticisms the officers of the Society made reply in their publications from time to time, but, conscious that nothing on their part justified these taunts they did not answer in a like spirit. Indeed, in an official paper of 1799, the mildness and candor of the declaration are such that the case is almost stated in the terms of the adverse party. The document says:

"The society possesses means of causing useful information to be published and diffused, and to reward, in some degree, the efforts of the ingenious and industrious in any new attempts of improvement, which they have intrusted the trustees with the application of. Our central situation, and nearness to each other, give us the advantage of frequently meeting, and receiving information. We do not, however, affect to disguise that our usefulness is, and will be, very much circumscribed without the aid of the practical farmer, and that it is only as an organ of information, that we can be extensively of importance."

Nearly every issue of the society at this early period contains a cordial or urgent invitation to "practical farmers" to communicate information, and in one of them it is remarked that grammatical defects are no hindrance and that the trustees will "methodize" the writing before printing.

It is proper to say that this opposition or jealousy does not appear to have been general, but it lurked here and there and manifested itself in various ways and must have been a hindrance. The experience is here recalled only as being a part of the history of the society, and as showing that the early stages of its march were not a mere holiday or picnic excursion, but called for some exercise of the virtues of perseverance, patience, magnanimity and good nature.

What has thus far been said has been with intent to indicate the motive in which the society had its origin, the character of its founders, the standard in discussion and action which they sought to abide by and the conditions under which it began. These last, so far as relating to the art itself, are to be regarded as the zero point from which its attainment in one hundred years is to be measured. This preliminary state-

ment cannot better be brought to a close than by quoting the spirited language of President John Lowell in a reply made in 1823 to some current animadversions, which throws light on the then past period, and which, as descriptive of the career of the society, is likewise applicable at the present date:

If it be asked whether the society did much in its infancy, we answer readily and frankly, no. But with still more confidence we add that it was not their fault. The institution was ahead of the age and of the intelligence of the State, and of public opinion. Its two first volumes will show that the trustees were not remiss. Their queries distributed all over the State, prove their zeal, and intelligence, and intimate knowledge of the real wants of agriculture. No society in Europe or America ever issued a more valuable set of queries, and no society could at this day improve them, except by some trifling additions derived from new discoveries. But neither Europe nor America were prepared at that time for the improvements and experiments which have since taken place. It is praise enough, that the Massachusetts Agricultural Society was the third in order of time, framed, established, and endowed to promote the cause of agriculture (as we believe), in any part of the world and that it never lost sight of its object, and was always ready to encourage, and reward all attempts to improve any one branch of agriculture, and give publicity to any ingenious suggestions for the promotion of this art.

The official record of the first meeting of the society, April 19, 1792, states that Samuel Adams was present, and while that point of detail is omitted in the record, it is in the nature of the case that he called the assembly to order, and, since nothing is said of any other person as chairman, undoubtedly he presided during

the brief session, the only business of which was the election of a secretary of the society *pro tem.* Time was taken for consultation and two adjourned meetings followed. At that of May 31, John Avery, Jr., was chosen permanent secretary, and seventy-two new members were admitted. At the adjourned meeting of June 14, articles of organization were submitted and what in them was necessary for the immediate purpose was adopted, and a permanent board of officers was chosen as follows:

President, Thomas Russell; vice presidents, John Lowell and Moses Gill; recording secretary, John Avery, Jr.; corresponding secretary, Oliver Smith; treasurer, Aaron Dexter; trustees, Cotton Tufts, Loammi Baldwin, James Bowdoin, Christopher Gore, Charles Vaughan and Martin Brimmer.

The names of three who had become members since the date of the charter appear. The articles adopted at the next meeting, June 22, provided among other things for an annual and a semi-annual meeting of the society; that the officers and those specially named as trustees should be the board of trustees, to which board the routine work of the society was to be committed, and that an annual fee of two dollars should be paid by each member of the society.

The first meeting of the board of trustees was held on August 3. It was voted to publish at once in the principal newspaper of Boston an announcement, with the list of officers, that the society was now organized and that the board would meet monthly, and soliciting communications of a practical character from all interested in the objects of the society. Another vote was passed recommending that members of the society

in different parts of the State should meet from time to time, inviting their neighbors to join them, for consultations and discussions relating to agriculture, with a view to the gathering of information useful in the work of the society. At this meeting was read a communication from Justin Ely of Springfield, descriptive of the practice of farmers in New York state in the cultivation of hemp. At the next meeting several papers were read, that of the most interest, apparently, being a recent English pamphlet giving account of methods of treating diseases, defects and injuries of fruit trees invented by William Forsyth, gardener to the king of England. The board at this time appointed a standing committee to examine critically all papers and communications received with a view to selecting such as, in whole or part, might usefully be published.

The first semi-annual meeting of the society was held on October 3. A letter from the printer of the Independent Chronicle of Boston, was received, in which he offered to publish the advertisements of the society gratuitously, a proof of the public interest which attached to them. Among the new members admitted was John Hancock, then Governor of the State.

At the trustees' meeting in November, subscriptions to the permanent fund of the society to the amount of $3,363, were reported. President Russell, who had subscribed $1,000, added to his gift such sum as might procure a common seal for the society, and a committee to report a device for a seal was appointed. At a subsequent meeting a society seal was adopted, the design of which was described by the committee as follows: "A plough should be a part of the device, with a pair of oxen, connected by a chain to the same. A stone wall, and a quick fence, with a gate; the field

beyond the gate, with sheep and cattle; the motto—SOURCE OF WEALTH: filled upon the garter—around the margin of the Seal, *Massachusetts Society for Promoting Agriculture, incorporated* 1792."

At the December meeting the first instance occurred in which the society had called to its attention an improvement in farming apparatus. This was in a letter from one who styled himself "A New Hampshire Farmer," and the article was described as an improved cart "for conveying empty barrels, and convenient also for loading hay." The invention was probably not of much value, as no action appears to have been taken by the trustees; but the inventor is entitled to mention here as being the file leader in a procession of thousands, who, in the experience of this and kindred societies in this State, have since come forward, each bearing his peculiar "Yankee notion." Many of these, it need not be said, were at once or after a brief trial, taken out of the rank of "notions" and accepted as the farmer's indispensable appliances, adding height to his stature, strength to his frame, and swiftness and deftness to his manipulation.

At the meeting in January, 1793, a petition to the General Court was prepared, asking for its cooperation and patronage, the appeal being based upon the proposition that "agriculture is at the basis of those arts which sustain and embellish life," and that therefore, the grant will be a proper act of legislation in seeking "the best welfare of the State." The petition failed, but later was renewed with good success. At the meeting in March, 1793, a communication was received from Benjamin Upton of Reading, giving account of his method of destroying canker-worms and preserving the leafage of his orchard, which in efficacy, he states to be in the ratio of five to one, as compared

with what can be done "in the common way." He does not describe that way, but his method was substantially that still followed of applying a mixture of tar and oil with a brush. The proportion was of twenty gallons of thin tar to one of whale oil, and he put it directly upon the trunk of the tree, covering a space of from two to six inches around the trunk according as the insects were running in fewer or greater numbers. The oil, he says, besides keeping the tar from hardening prevents the tar from injuring the bark.

The board voted to have the letter printed in the Boston newspapers of the next Thursday and then voted to offer two premiums, the first in the history of the society. One of $50 was for "the most satisfactory account of the natural history of the canker-worm," and the other of $100 for the most effectual and cheapest method of destroying these insects." The letter of Mr. Upton gives details of his method not indicated here. Besides the "common way," whatever that was, other hopeful remedies had been proposed through the public prints and otherwise. At that date any of these seemed as likely to succeed as that of the tar and oil. The object of the trustees was to bring out still other methods that the best might be ascertained, and very logically they began the business by seeking first for adequate knowledge of the habits of the insect.

Time was taken to consider what other matters were worthy of like attention and in April, 1793, premiums were offered relating to manure; to the cultivation of wheat; to the improvement of wild lands; to the raising of trees; and for the most beef from the fewest acres; the greatest stock (farm animals) maintained on the least land; the best vegetable food, except hay, for wintering stock; the most and best wool from a given number of sheep; the best process for making

cider; the best method of making maple sugar, and for butter, cheese, flax and salted provisions. It was voted that those obtaining the highest premium might at their option have the society's gold medal, suitably inscribed. The medal had for its device, the seal of the society on one side, and engraved on the reverse these words—"Presented to (A——B——,) 1796."

In April, 1793, at the meeting of the society a vote was passed looking to an encouragement of the formation of county societies for promoting agriculture.

The trustees in February, 1794, appointed a committee "to consider the expediency of procuring a piece of ground for the purpose of agricultural experiments." This project ultimately took a somewhat different shape and led to the establishment of the Botanical Garden at Cambridge, in conducting which the society for some years cooperated with the college. At the April meeting of 1794, an analysis was ordered of a specimen of earth, said to be marl and of value as a fertilizer. In the following October a report was made by Dr. Cotton Tufts to the effect that by tests with four different acids, and with spirits of ammonia, the earth had no chemical affinity with vegetable or mineral acids, and so was worthless for the purpose named. In July, 1794, a letter from Dr. J. C. Lettsom of London, Eng., was read expressing his appreciation of having been chosen as an honorary member and enclosing a draft for ten guineas, which he desired should be applied in the society's work in the direction of natural history.*

* John Coakley Lettsom, M.D., was a physician of extensive practice in London, a man of versatile mind and general scientific attainments and a writer of repute on various subjects outside of those pertaining to his profession. He was a personal friend of Dr. Benjamin Franklin. He was interested in agriculture, and it is recorded of him that he was the first to introduce the mangel-wurzel into England, about the year 1773. He was born in 1744; died in 1815.

The trustees' meeting of May 29, 1795, was of special interest as there were awarded two premiums, the first ever given by the society. They were for essays on compost manures. Upon opening the sealed packets the names were found to be Rev. Phinehas Whitney of Shirley, writer of the essay for which $50 or the gold medal of the society had been offered, and Jesse Bannister of Brookfield, writer of the essay entitled to the premium of $30. It was voted to publish Mr. Whitney's essay at once in the newspapers. The premiums for the most satisfactory history of the canker worm had been earlier offered but the time for competition did not expire till July 1, 1795. In August the essay on that subject entitled to the gold medal or $50, was found to have been written by William Dandridge Peck of Kittery, and the report says that the essay "bearing the signature of a triangle appears very ingenious and useful, and if the author shall consent that the paper containing his name be opened and the essay published, $25 or its equivalent in plate shall be given him." This was consented to subsequently and the writer proved to be Rev. Noah Atwater of Westfield. In October, 1796, awards were made in like manner for an essay on the cultivation of wheat to Rev. Reuben Holcomb of Sterling, and for an essay on bringing wild lands into a state of improvement, to Frederick Plympton of Sturbridge.

The essay on canker worms by W. D. Peck undoubtedly impressed the committee, as it would any reader of the present day, as showing the superior attainments of the writer in his department of natural science. In the method of discussion, analytic treatment, closeness of attention to details and aptness and conciseness of diction it does not fall below the modern standards. When, therefore, at the next meeting of

the trustees in September a letter was received from a prominent naturalist of New Jersey, asking if any member of the society could give him information on a plant called the *chicorium intybus*, the board at once voted to refer the letter to Mr. Peck. He returned a satisfactory account of the plant, which was read at the October meeting. In August, 1795, a premium of $50 for the best essay "on the natural history of the worm that has lately infested cherry, pear, quince and plum trees, called the snail or slug worm," was offered. The ultimate date for competition was to be Sept. 30, 1797. The award was made in the usual manner and it was found that Mr. Peck was again the successful essayist. It was voted to print the essay and accompanying illustrations, and he was requested to superintend the engraving. These experiences probably had the effect of drawing particular attention to him and it appears, though not on the society's records, that he removed to Cambridge, where, in 1805 he became professor in natural history in Harvard College of which he was a graduate in 1782. He held the professorship till his decease in 1822. At an early date he became a member of this society.

In April, 1796, a gold medal was awarded in the usual manner to Rev. Jonathan Newell of Stow, for a method of draining ponds. The town of Stow has a permanent reminder of him in the flow of the stream from a pond in or near the center of the village. Once the flow was in the opposite direction, and was called "Strong-water brook". The brook has now only a legendary existence. It is noticeable that at this early stage clergymen were very successful in gaining premiums. This, it may be concluded, was owing partly to the circumstance that other experimenters and investigators did not, in very considerable numbers,

feel well competent to express their experiences and results on paper, and partly to the fact that rural clergymen of that day had to economize on their meagre salaries, and personally engage in farming operations, and so were well qualified to speak from experience. At a semi-annual meeting in 1798, the society voted to request Rev. William Welles of Brattleboro, Vt., to communicate an essay on the cultivation of barley. He did so and added thereto full directions for the making of small beer and strong beer. This addition might seem anomalous on the part of a clergyman at this day but it is to be considered that but little use was made of tea and coffee by farmers at that period, because of the cost, and that small beer, or as it was usually called, "home-brewed beer," was in almost universal use among them.

In the latter part of the year 1795 the society issued its first pamphlet. It contained the rules and regulations; a list of officers and members; a list of premiums then pending; the two premium essays on the canker worm; a history and description, with results of experience in Virginia, respecting the then newly discovered "forward wheat;" the premium essay on compost by Rev. Mr. Whitney; a carefully prepared and clear account of the method of making maple sugar, by a farmer of Northfield, Mass., who dates the paper Feb. 4, 1794; home communications relating to the management of cows and sheep, and to butter making and tree cultivation; and selections from foreign publications descriptive of the then recent and novel successes of Robert Bakewell in England, in breeding cattle and sheep, and of the methods in use in England for making Stilton and Cheshire cheese. One or two other articles were in the contents.

Much attention was given by the society at the be-

ginning to the subject of wheat cultivation. The possibilities of grain transportation, now so familiar, were then not only beyond conjecture but beyond belief. A prediction of them would have been classed with the story of Aladdin's lamp. It was doubtless supposed that the main reliance for wheat supply must be the home fields. Earnest efforts were accordingly made to get the best and most manageable and productive seed wheat. The records prior to 1800 have mention of several distributions of seed-wheat among members of the society. A favorite seems to have been the Early Virginia wheat, produced from a native seed, and on one occasion $45 was paid from the funds for a quantity of it. Samples were also obtained from Connecticut, New Hampshire, Quebec and Rio Janeiro. Later, within a brief period, samples were received of wheat grown in Italy, Egypt, Southern Russia, Siberia, Patagonia, Chili and at the Cape of Good Hope, in each case sufficient for testing by cultivation. Several of these were brought by commanders of vessels of the United States navy. Other seeds of various kinds were procured from distant places and distributed. A special importation from England of several varieties of potatoes was made. In 1792 the potato had not gone into common use in this country, but it was beginning to be appreciated, and before the close of the century it superceded the turnip, which had been the chief vegetable on the farmers' table. Hope was generally entertained in this and other States that silk production might profitably be followed. Accordingly, mulberry seeds in considerable quantity were distributed and premiums offered for mulberry cultivation. Among the seeds brought from foreign ports by vessels of the navy were Persian rye and "pompion" seeds.

During the period indicated relations were established with other agricultural societies, viz., the Middlesex society, when formed in 1794; with the Board of Agriculture of Great Britain in 1796; with the new society at Sturbridge, Mass., in June, 1799, and with the New York society. Friendly letters were exchanged in each instance and copies of the society's publications were sent to each society when issued. The most interesting, at the present date, of these experiences is that with the British Board of Agriculture. In November, 1794, William Strickland, a member of that board, who was contemplating a visit to America, was proposed as an honorary member, and unanimously admitted. In the following August a letter dated in Philadelphia was received, in which he acknowledged with thanks a notification of his election. Soon afterwards the trustees sent some of the society's publications to the board in England, and upon his return he was authorized by the board to make due acknowledgement, which he did, writing from his residence in York, and with a graceful compliment, considering then recent events, dated his letter, July 4, 1796. He expressed the desire of the board to cooperate with the society "in promoting objects so eminently conducive to the benefit and happiness of mankind." The letter was accompanied with publications of the British board.

The trustees responded with a vote of thanks for the gifts, and they instructed the secretary to write to Mr. Strickland, certifying to the vote, "and send him a small cheese-mill, such as is used in this country." In June, 1797, a letter from Mr. Strickland was read in which he states that he has received "a machine for breaking curds in the manufacture of cheese," and says, "I make no doubt that it will meet with the

appreciation of the society of the Board of Agriculture in England, as it appears to me to be well calculated from its simplicity and efficacy to save much trouble in the laborious and delicate operation of cheese making." In September, 1797, a letter was received from Sir John Sinclair, president of the Board of Agriculture, acknowledging receipt of copies of the society's publications and a model of a "cheese-curd breaker" and expressing the thanks of the board therefor.

In April, 1796, occurred the decease of Hon. Thomas Russell, the president, and at the annual meeting of that year John Lowell was chosen to the chief office. Numerous matters having a direct relation to agriculture were considered and acted upon during the first eight years. Among these was the formation of a library, for which the most reputable and authoritative works on agriculture were purchased, as issued. Many communications to the society, recognized at once as of practical value, were ordered to be published in the newspapers. In the list of things wherein action was taken by publication or award of premium are the following: An analysis of soils, that the chemical qualities of good and poor soils being known, what was lacking in the latter might be supplied, if within the limits of reasonable cost; hemp and flax cultivation, and machines for preparing the fibre; apparatus for rapidly moving bodies of earth; improved breeding of the native sheep; cultivation of onions; raising apple trees from the seed; the management of bees; care of orchards and pruning; raising of hoop-poles; a description of Thomas Jefferson's newly invented plough and mould-board; and improvement of wild lands. A method of removing brush without ploughing, and another by ploughing and following

with a peculiarly constructed harrow, were passed upon.

In an award in this line there is a special manifestation of comity with reference to the newly formed Sturbridge Agricultural Society. The trustees say, that while the writer of the essay "does not propose an entirely new method, yet in consideration that it has borne the test of experience, and being attested by a respectable agricultural society in the county of Worcester, it is adjudged a premium." At the last meeting in December, 1799, the trustees issued the printed list of forty-nine questions to which President Lowell referred in remarks already quoted. The purpose of these was to learn, through the widest inquiry possible, the actual condition of agriculture throughout the State, both as respects improvements made and defects existing, with intention that by subsequent circulation of information, remedies for the latter might be suggested.

The affairs of this early period have been presented somewhat more fully and minutely than is contemplated in narrating the later history, wherein a statement of the more significant and conspicuous facts will suffice, and will bear like testimony. What has been given certifies to the zeal, diligence, liberality of spirit and breadth of view with which the society began its work; that almost from the beginning a perceptible impression was made upon the minds of the more intelligent part of the community, and tended thus towards a revival of agriculture; and that in starting little rills of influence, which later broadened into streams that yet beneficently flow, the "theoretical farmers" were in fact a very practical sort of men.

Steady progress on the lines already indicated was made by the society during the early years of the present century and the board of management showed special activity and enterprise in widening the field of usefulness. Improvements in farming methods and apparatus received prompt and cordial recognition, and instances occurred where premiums were awarded to persons living out of the State. No premiums were given on patented articles, but recommendation of such was made, when deserved, in the official publications. The first year of the century brought out a suggestion, which, though not immediately acted upon, was frequently discussed and gradually gained favor, namely, that it would be an effective encouragement to farming industry to establish near Boston an annual or semi-annual cattle fair. When the idea took shape in 1816, it was not as a cattle fair but a cattle show. The original proposal was to bring together farming animals and other products for sale on the spot, as well as for competition for premiums.

Considering the success and manifest utility which have since characterized exhibitions of this kind it might seem, at first glance, that the board of management was overcautious, or lacked insight as to what would be a popular and taking thing. To judge rightly in this as in many other matters wherein the society took action during the first forty years, the vast difference of circumstances then and now must be taken into account. In the instance here referred to it is to be remembered that thirty years were to elapse between the date of the suggestion and that of the first railroad. It is easy now to assemble great throngs of people and entertain them with ocular proofs of superior farming drawn from a wide spread territory. But in 1801 an exhibition at Cambridge or Brighton

of specimens gathered from the nearest towns of Essex, Middlesex and Norfolk, and an awarding of premiums in the name of Massachusetts agriculture, might have been deemed not only invidious as respects other counties, but inadequate and unjust as respects the proper renown of the whole State in the particular of the agricultural art.

Due appreciation of the society's efforts during the period alluded to depends upon having in mind the existing difficulties of communication, as well as of travelling. The rates for letter postage then would now be deemed extortionate. No newspapers were published oftener than once a week, excepting perhaps one or two semi-weeklies, and the first daily paper did not appear till 1813. The circulation of these was small and no adequate space for diffusion of agricultural information could have been had in any of them. The society was restricted in this part of its work to pamphlet issues. In 1801, its publications were distributed in some of the remote sections through the Worcester, Middlesex and Kennebec agricultural societies. In 1812 a special effort was made "to awaken a livelier interest in the important subject of agriculture," and 1,000 copies of a letter addressed to farmers were printed. One copy was sent to each town clerk in the State with a request that he would read it in town meeting. All the clergymen of the "inland towns" of the state were made honorary members of the society and letters were addressed to all "requesting the exertion of their influence in aid of the measures of the board." These efforts were apparently of good effect, for in the next year it was noted with congratulation in one of the issues of the society, that "numerous town societies" had been formed for promoting agriculture, and in another connection the

names of fifteen of these are given. These, as well as the county societies, were thereafter available for gathering and distributing information. In 1813, the society began a serial publication which was called the "Massachusetts Agricultural Journal" and was issued semi-annually.

In 1801 it was voted to appropriate $500 towards the foundation at Harvard College of a professorship of natural history, and, after proper negotiations, it was established in 1804. The plan, so far as connected with the objects of the society, provided for scientific observation of the growth of vegetation and of the habits of noxious insects, that methods might be devised for their destruction, and a cultivation, for sale and distribution, of the seeds and roots of useful plants. This cooperation of the society and college continued for twenty-five years, when the annual grant which had been made by the State, in aid of this part of the society's work, ceased. During the period named the society voted annually a sum of money from its own funds for the work, and appointed each year a board of visitors to report thereupon. Herein was the origin of the present "Botanical Garden" at Cambridge.

In the year 1801 the society took a very important step, which marks the beginning of a movement which has gone on with increasing benefit both to the farming population and the general public, the movement, namely, by which all sorts of farm-bred animals have been immensely improved in the breeding of the most desirable qualities. Neither by a comparison of written records, nor by listening to the testimony of the oldest citizen qualified to speak on the subject, can a true idea be gained of the disparity between the conditions prevalent then and now; and it is even

farther beyond the mind's capacity to estimate the money value of the improvement. Much of the benefit thus realized by the whole people is attributable to the endeavors of the society, constantly exerted during the long lapse of years, and much has resulted from efforts otherwise made or prompted. Here, however, was the beginning of any concerted action, in the offer of a premium in July, 1801, for sheep for breeding purposes, "superior to any breed now in the State"—a premium of $30 for each animal introduced into the State, and if from a foreign country, $50.

In 1802 the trustees had their attention called to the fact that Col. David Humphreys of Connecticut, had that year imported 100 Merino sheep. In accordance with their practice of ignoring State lines in specially meritorious cases, the board voted to him the society's gold medal of $50. At the next monthly meeting after the passage of this vote it was announced that, in October, 1801, a pair of Merino sheep had been imported from France by Seth Adams of Dorchester, Mass. The fact having been verified by a committee, a $50 gold medal was given him. From the year 1814 dates the practice, which has steadily been followed, of importation, by the society itself, of choice breeding animals, this first instance having been from France, of two bulls and two cows of the Alderney, or what is known as the Jersey breed.

In 1805 the General Court recognized the public utility of the society's endeavors by granting to it a township of six miles square in the district of Maine, in aid of the proposed professorship of natural history. While the proceeds of the sale of this tract did not add to the society's permanent fund it enabled the trustees to ascertain, by a satisfactory test, what practical and direct benefit to agriculture might be derived through

science, as applicable in botany and entomology. In 1809 another township was granted to the society on like conditions. This tract appears to have been shared equally by the state of Maine, through a construction of a clause relating to public lands in the act by which Maine was separated from this State. In the contract with the college as to the administration of the professorship it was stipulated by the society that an acre of land should be devoted to raising seeds of culinary vegetables and producing specimens of new and useful grains and grasses.

In 1813 the society's permanent funds, being the sum of what had been contributed by members, with accrued interest, amounted to nearly $20,000. Liberal payments had been made each year in premiums. As early as 1808, the total of annual premiums offered was more than $1,000. In 1814 the legislature made what is recognized in the society's current publication as "a liberal grant." It was an allowance of $1,000 annually from the public treasury "for printing and circulating their publications on agriculture only; for the raising of seeds and plants, or the expense of any experiments made by them with a view to promote agricultural knowledge."

The satisfaction which the members of the society must have felt upon this action of the Legislature was not limited to the pecuniary benefit thereby conferred, for in the resolve itself as adopted and printed in the official volume of acts and resolves are embodied, as preamble to the resolve, these gracious words of the committee reporting thereupon: "Your committee are satisfied that the object and design of the society are laudable and useful; that it has a tendency to diffuse knowledge and promote a spirit of inquiry and improvement, and your committee are also convinced

that the said society by its premiums for introducing Merino sheep and by encouraging the introduction of new seeds and trees has already been productive of a great public benefit." In 1816 the Legislature granted $500 and a like sum annually thereafter to enlarge the total of premiums given by the society at its annual cattle shows.

In 1807 a sufficient number of answers to the circular of the society containing the forty-nine questions had been received to warrant publication, the result being a pamphlet of thirty-eight pages. While the number of persons responding was not as great as had been hoped, the committee of publication found some satisfaction in the fact that the towns heard from were separated by considerable distances, making the response, as a whole, more instructive than if it had come from towns in a particular section of the State. The towns heard from were Barnstable, Brookfield, Brookline, Concord, New Gloucester in the district of Maine, Marlboro, Newbury, Sturbridge and Worcester and the several towns represented by the agricultural society of western Middlesex. The pamphlet must have been acceptable to readers of that date and is still historically interesting. Two or three points may here be noted as indicative of the then existing condition of agriculture. The Marlboro correspondent in touching upon the topic of woodlands sagaciously remarks: "One half the woodland now reserved would suffice if our farmers paid a little more attention to the finishing of their rooms. In order to save $20 in finishing his house, the farmer often subjects himself to an annual expense of half that sum for fuel, which otherwise might be spared, without reflecting that he might as well borrow money at 50 per cent. to complete his house."

The responses show that at the beginning of the century a medium crop of hay for an acre of upland in Marlboro, Concord, New Gloucester and Newbury was one ton; in Worcester, Brookline and Barnstable, one and one-half tons; in Brookfield, 18 cwt.; in western Middlesex towns, 16 cwt. A medium crop of Indian corn per acre in the same towns ranged from 40 bushels in Newbury to 20 bushels in Barnstable. Among the products of the farm sold for money, Marlboro and Worcester name "mules." This breeding was a distinct advance upon the state of things existing a few years prior; for the first importation into the United States for this purpose occurred in 1795, when two jacks were landed at Portsmouth, N. H., being a gift from the king of Spain to General Washington.

The correspondents report that the shelling of Indian corn was generally done with a flail, though in one town the approved method was by rubbing the ear of corn against the edge of a spade laid flat-wise. But a brighter day in this particular had dawned, for already, in 1803, an inventor had gained the approval of the board of trustees for his newly contrived "corn-sheller."

In 1802, after a service of six years, President Lowell declined a re-election, and Caleb Strong, who at the time and during five years following was the Governor of the State, was chosen president of the society. He held the office until 1805 when John Adams, ex-president of the United States, was chosen. Mr. Adams was president of the society until 1813 and Dr. Aaron Dexter was his successor. In 1812, Josiah Quincy, who for a considerable period had been a member, was elected a trustee of the society. Evidences of his vigor and versatility appear frequently in the record of the next fourteen years. In 1813 he

contributed to the official publication of the society an account of his method and success in cultivating a hedge fence of American thorn on his farm in the town of Quincy. It was four-fifths of a mile long and in five years had attained a height of five feet, and was dense enough to prevent the passage of cattle. The experiment, he said, was designed to show what would be practicable and economical in those parts of the State where there is a scarcity of stone for building walls. This scarcity is, of course, no part of the fame of the town of Quincy. His next important experiment was, however, intended for local instruction in the first instance, though by publishing the result in the society's Journal in 1816, the instruction became general, and has ever since been followed by the farmers of the State. He had observed, he said, "a universal prejudice" among farmers against the cultivation of carrots for winter feed of cattle. This aversion was based upon the amount of labor found necessary in raising a small quantity of carrots for culinary purposes in a garden bed. Being, as it would appear, something of a "book farmer"—for he disclaims any originality in the method—he prepared and ridged, substantially as the work is now done, two tracts of 3¼ acres each, keeping exact record of labor and other cost. The result was a yield of 2,562 bushels of roots on the two lots at a cost, including allowance for rent of land, of $322. Allowing a value for 16 tons of carrot tops, as fodder, he figured the cost of the roots at eleven cents per bushel. He adds that the farmers of his vicinity had taken up the practice and admitted that the labor is not greater than in raising potatoes and the feed better for cattle.

For a number of years after the practice of importing Merino sheep was begun the society's publications

had much to offer of advice and discussion as to wool and the raising of sheep for the shambles, etc. One writer in 1813 naively begins his essay thus: "The present high prices of sheep are to be ascribed principally to two causes: First, the number of speculators in the market who buy to sell again; and, secondly, to the prevalent erroneous practice in breeding." He goes on to criticize the practice, saying that "hitherto, unfortunately, the finest sheep have been selected for the butcher and the poorest, only, kept for breeding." He gives reasons for reversing the practice, but does not suggest any remedy for the other cause of high prices paid by consumers, which, as respects various farm products, has not yet wholly ceased to be lamented.

In 1814 a letter from Justin Ely of Springfield, one of the most intelligent contributors and members, was published in the Journal recommending the cultivation of rhubarb to save the cost of medicine, for which the imported root was used; and he speaks of his own success with some roots which had been sent to him by Charles Vaughan of Kennebec. In printing the letter the editor declares that there are two kinds of rhubarb, and re-iterates by saying, "we are satisfied we are right," and then adds that that which his correspondent has received is probably not the true medicinal root, though it may have some value in that way. His reason for this opinion was that Mr. Vaughan had given to friends in Boston specimens of the other kind of rhubarb, the stalks of which, the editor says, are "equal or superior to gooseberry, as a preserve for tarts." The phrase indicates a suspense of judgment as to whether the edible was liable to supercede the gooseberry or not. Evidently neither Mr. Vaughan nor his Boston contemporaries suspected the commer-

cial value of this garden novelty, nor had any prophetic vision of the staggering wains that now daily, in the season, go forth from thousands of farms in Massachusetts towards the nearest market, laden with the gooseberry substitute.

Efforts to solve the wheat-growing problem did not cease, and in 1814, four members reported in the Journal their success, and described the method, in raising a large crop free from "rust" (a blight which the grain was thought to be specially liable to in seashore towns), namely, John Lowell at Roxbury, Josiah Quincy at Quincy, Peter C. Brooks at Medford and John Jenks at Salem. In 1814 a gold medal, of $50 value, was given to Andrew Haliburton of Portsmouth, N. H., for his newly invented, but not patented churn. In principle, though not exact form, it was the same as the rotary churn now in use. The value of cut feed for cattle was becoming understood and in 1815, the trustees awarded Elisha Hotchkiss of Brattleboro, Vt., the highest premium for his hay or straw cutter, and bought of him his patent right for the State of Massachusetts. Certificates granting liberty to use the apparatus were freely given by the secretary of the society to persons in this State, on application. Two years later another patented cutter appeared, which was an improvement, and embodied the main principle of that now in use.

In 1814 an article appeared in the Journal, with cordial editorial commendation, relating to the mangel-wurzel beet. It was a translation from "the most approved work in agriculture in use in France." The vegetable is termed in literal translation "the root of scarcity," which seems a quaint if not ambiguous name, until the text explains it. The statement is that the Germans, and the French who copied their

practice, pluck the lower leaves of the vegetable during its four growing months for succulent food for cattle, and that the root will keep sound, after harvesting, for eight months, thus supplying the cattle the rest of the year. Hence, the intimation is that a liberal cultivation of this root will offset and defeat scarcity in other sorts of feed during the round year.

Much anxiety was felt during the period now referred to as to a probable early scarcity of fuel, and premiums were offered by the society for the raising of forest trees. At the beginning of the century the highest premium was awarded to Col. Robert Dodge of Hamilton, for raising, from the seed, 4000 oak trees. In 1816 an elaborate article on the preparation and use of peat was published in the Journal. The editor, in a preface, remarks that much suffering experienced during the late war might have been avoided had a knowledge of this fuel been generally diffused, and he has the satisfaction of being able to say that "in many places through which the Middlesex canal passes, peat bogs were found from 20 to 50 feet deep. There is undoubtedly enough good peat, without using the top of the ground which is loose and spongy, to last the country for centuries." The arrival of anthracite coal, about the year 1830, eventually solved the fuel problem.

In 1800 the first seed-sowing machine was exhibited and recommended by the trustees. In the following year it was announced that experiments had proved that the exchange of seeds and roots between distant places or different climates was not of special benefit, but that the selection of the earliest and best seeds, from the most flourishing stalks, and planting only the best roots, were of importance. In 1814 machines for raising water for irrigation, and others for threshing

grain, were shown, but did not gain the approval of the trustees. In 1816 a newly invented winnowing machine received their commendation. The first cattle show of the society took place at Brighton, Oct. 8, 1816. It was successful beyond expectation and was repeated annually upon broader lines in the following years.

At the close of the official year following this event the society reached its quarter-centennary. The abbreviated record of the period here made is sufficient to evince that it had exercised a steadily increasing influence and had now an active public opinion as its auxiliary. Beginning with conditions of general apathy, of more or less prevalent distrust as to its intentions, and of incredulity that anything important could be gained to the farming interest, it had created a feeling of confidence as to the future of the agricultural industry and excited a spirit of inquiry. It had widely distributed thousands of pages of printed matter, supplying the best information then obtainable relating to the art; given impetus to the formation of numerous co-working societies, and printed the essays and contributed to the premiums of some of the more important among them; it had introduced new seeds and plants and choice breeds of farm animals, from foreign lands; brought new modes of farming into acceptance among leading farmers in different parts of the State, thereby exerting an exemplary influence upon others who gave to books and pamphlets no welcome; it had set fairly at work the inventive faculty of the land in devising better farming apparatus; enlisted science to search and experiment in the behest of agriculture; and, by its successful cattle show, had reached the popular heart (which is always responsive in beholding the novel and the extraordi-

nary), thereby entering upon a radically different but most effective method of diffusing agricultural knowledge, the method of "object teaching."

In this retrospect one event already mentioned may briefly be dwelt upon, since it will recall, with special distinctness and amid interesting circumstances, a historic figure, and will permit, in the way of preface, reference to a practice on the part of the board of trustees which has been kept up from the earliest years to the present time. The event was the retirement of John Adams from the presidency of the society, and the practice is that to which he alludes in his letter of farewell, the holding of business meetings at the residences of members. There being twelve members of the board, the custom in recent times has been to designate, at the beginning of the year, for each member, the particular month when he may expect the others to be present at his house, to transact business and to accept his hospitalities. The meetings have, therefore, always had a social as well as a utilitarian intent. In reverting to the fraternal relations thus established, and the pleasure he had derived thereby, Mr. Adams no doubt expresses a sentiment common to all who have ever been members of the board. The following is his letter.

QUINCY, May 25, 1813.

Dear Sir:

It is not with any enviable feelings that I find myself under a necessity of addressing you at this time, and in this manner, to request the favor of you to communicate to our society my determination to retire.

As my advanced age and indifferent health render it impossible for me to attend the meetings of the society or discharge the duties of my office with any regu-

larity, I decline the future election to the chair of the Society for Promoting Agriculture.

In taking a respectful and affectionate leave of the Massachusetts Society for Promoting Agriculture, of their trustees, and of the visitors of the professorship of natural history and the botanical garden, I am bound in duty to express the high sense I entertain of the honor done me by repeated elections to their chair, and the gratitude I feel for the pleasure I have had in their conversation in many of the most social and happy days of my life.

My best wishes attend the members for their health and happiness, and sincere prayers for the promotion and prosperity of agriculture and horticulture in Massachusetts and through the world.

JOHN ADAMS.

TO DR. AARON DEXTER,
Vice President, etc.

The period immediately succeeding that now passed in review was prolific in things novel in the way of suggestion, experiment, invention and enterprise. Nor were the earlier subjects neglected. Continued attention was given in the society's publications, or by the offering of premiums, to mulberry cultivation. Much foreboding as to the disappearance, at an early age, of forest trees, was expressed and the cultivation of such trees was urged. The cultivation of wheat was persistently clung to, and premiums were paid for extra large crops of that grain. The utility of the ruta baga as compared with turnips of the ordinary kind and with mangel-wurzel was much debated, the first premium for a ruta baga crop having been offered in 1819. In 1819 John Prince, of Roxbury, an active member of the society, sent for publication a letter describing a new pest which was infesting apple trees,

the "borer." He says, "I mentioned the subject to Professor Peck and to the corresponding secretary (Mr. Lowell) and to several others, none of whom had heard of this destroyer of the apple tree." He recommended extermination by means of a wire, thrust into the hole where the worm is at work.

In 1818 a letter was received from a farmer of Framingham giving account of a large annual yield of butter from a particular cow, and of his method of generous feeding. The editor of the Journal commented approvingly and drew from his reserves a manuscript sent by Rev. Mr. Packard in 1799, the words quoted from which, the editor says, ought to be pasted up in every dairy in the State, viz.: "Three cows [on a farm in Marlboro] produced 278 pounds of butter. They were a more productive dairy than six usually are with ordinary feed. Farmers egregiously mistake when they overstock their farms. Were dairies always estimated by the pails of milk they produce, instead of the number of cows, many a farmer's wife instead of asking her husband to buy another cow would urge him to sell two, to enrich the dairy." During the same year a Norfolk county farmer protests against the prevalent recklessness in pruning fruit trees, by means of a hatchet or bill hook, lopping off branches six or eight inches from the limb and leaving the remnant to rot. He urges that pruning be done in May or June when the sap is flowing, instead of March, as was usual, and cutting the branch smoothly off, close to the limb, covering the cut with a cement of tar, beeswax and ochre; also the cutting away of the sky-pointing young branches, which he calls "gluttons," and giving the horizontal or fruit-bearing branches a chance.

In 1819 the importance of statistics of agriculture

was emphatically affirmed in the Journal, with incidental commendation of a new variety of early corn cultivated by Samuel W. Pomeroy of Brighton, vice president of the society. The main point of the argument was that if farmers had knowledge of the magnitude of the particular interest affected favorably or adversely, they would be more generally impelled to active measures. The remark as to corn was: "Every one knows that the crops of Indian corn were generally cut off by frosts in 1816. Had it been known what quantity of Indian corn is usually raised in a season in the county of Middlesex, for example, the loss, in 1816, would probably have been so much more felt that more attention would have been paid to the recommendation of a species of corn cultivated by Mr. Pomeroy of Brighton, and others, not a field of which suffered by frost that year. This species, besides bearing a large and fruitful ear, husks itself when ripe." In the Journal of the following year Mr. Pomeroy discussed the importance of the corn crop and recommended extensive cultivation. Having recognized in his article certain modifying considerations, especially a due regard to rotation of crops, he added this interesting remark: "But I wish at the same time to hold up to view the golden fleece found by our Pilgrim Fathers on their first landing, and which, had it not existed or continued with their descendants nearly a century after, the fair inheritance we now possess, in the opinion of many sound political economists, could not have been transmitted to us."

In 1824 overtures were made by the managers of Dummer Academy in Newbury, for bestowment of the patronage of the society in conducting an experimental farm there. It was implied in the proposition that agricultural instruction should become a part of the

curriculum of the institution, a foreshadowing of the State Agricultural College of a later date. The trustees of the society responded with cordial approval of what was suggested, and said that they had previously recommended something of the kind to the Legislature. They judged, however, that such an enterprise ought to be under the direction and control of the State authorities.

In 1830, after conference and agreement with the officers of Harvard College, the connection of the society with the Botanic Garden was severed, and it went into the sole charge of the college. This step appears to have been taken in consequence of the action of the Legislature in refusing further grants of money for the purpose. The $600 received from the State that year was paid over to the college, and the fund derived from sale of the Maine townships became vested in the college. No doubt much benefit to agriculture had, directly and indirectly, resulted from this cooperation, during 26 years, of the college and the society. The corresponding secretary of the society from 1798 to 1806 was Rev. J. T. Kirkland, and he continued to serve as a trustee until 1810, when he became president of the college. He served in that office until 1827 and manifestly took a personal interest in the botanic-agricultural department of the college. This is indicated, in part, by various payments made to him during his presidency, for seeds, plants, etc., and noted in the Society's records. In 1836 the trustees, after investigation by a committee, offered premiums for the cultivation of the sugar beet and the production of sugar therefrom.

In 1824 the Journal contained a long article on road making, giving a particular description of the method employed in England by John Loudon

McAdam. The relation of this improvement to agriculture was indicated by the editor in quoting the remark of a respectable farmer that "fuel is now (in 1824) cheaper in Boston than 30 years ago;" the reason being that roads had been so improved that it had become more of an object, to a wider district of country, to bring wood to the capital. This improvement of roads had not been by the McAdam method; but the point of the editorial comment was that still better roads would make the great market town still more accessible to the farming population, for bringing all their products. In 1827 the Journal published an article of twenty-five pages length which was mainly a description of the project, then under consideration, for building the Baltimore and Ohio railroad. An official survey had not been made; but it is editorially remarked that one had been made in the State of Massachusetts for a more difficult road from Boston to Hudson river, and that the stock already subscribed for much exceeded the estimate of cost. An official report on this survey had not been published; but the facts developed in the Baltimore preliminary report were deemed important to the farmers of Massachusetts, as respects facility in getting to market. The great speed with which journeys may be performed and freight conveyed was held up to admiration, and instances in English experience were cited. By an engine of ten horse-power, it is said that, in one instance, 50 tons of goods were carried on a level road at the rate of six miles per hour, and lighter cars for conveying passengers were moved at twelve or fourteen miles per hour. The cost of the Quincy granite railway is stated at $11,052.98 per mile, which was believed to be one-third more than, in 1827, would be the cost.

Soon after 1820 were exhibited at one or another of the society's annual cattle shows, and gained official approval, a newly invented corn-cracking mill, new devices for a corn sheller and a hay cutter, a new style of plough for paring or slicing meadow land, and a flax-seed separator. In 1818 a premium of $25 was paid for a threshing machine, but it was not an entirely satisfactory apparatus, as special efforts were made about the same time to get something less expensive and better for the purpose than had been found; and, among other things done, a letter was written to Thomas Jefferson, asking for a description of a threshing machine used by him, and his opinion of it. In 1822 a premium of $75 was paid for Gregg & Hale's threshing machine. In 1824 a lengthy description was given in the Journal of a "foreign invention not much known in this country, called the hydraulic ram"; and the apparatus is recommended as serviceable where irrigation is desired, and for farms properly situated as respects a head of water, as being cheaper than the cost of a well and pump, and yielding a water supply without manual labor.

More than in the case of the threshing machine, solicitude was manifested for many years, by the trustees, for the improvement of the plough—that implement which is primary in all agricultural operations, and which, in its rudest forms, has been said to mark the beginning of human civilization. During a few years a premium was offered "to the person who shall exhibit the best plough for common purposes, of an improved construction, and of his own invention." Ploughs were imported from England, in one instance by the society, and in others by leading members, in the hope that the right model might be found; but no important gain appeared in the demonstrations of

either American or English ingenuity, in this line, until a date which will be named below. The society's importation was made in 1810, but no commendatory report of the operation of the plough appears. At the first public "ploughing match," given by the society in 1817, an English plough belonging to one of the members and officers of the society, John Prince of Roxbury, was used in the competition, which in part, of course, had to do with the skill of the ploughman and driver. No superiority appeared in the plough; for it may be assumed, from the well known character of Mr. Prince, that he provided competent manual skill. Several other ploughs of the home-made sort did as well, and two did better; and for their work the premiums were awarded. The later records of the society indicate that the first satisfactory plough originated in this country, as certainly did the main idea to which the improvement of the instrument is traceable.

While the evolution of the plough from the primitive condition in which, as already described, it existed in 1792, is not attributable to any measures taken by the society, there is warrant for saying that an early and prominent member of the society had some share in promoting the improvement witnessed during the first twenty years of the present century. The story of that advance in the plough-making art is so intrinsically interesting, so pertinent to the general theme here under consideration, and, in proper narration, is brought so closely home to the society itself, that it cannot be deemed a digression briefly to repeat it.

The "main idea" alluded to above, was given to the public by Thomas Jefferson, through letters addressed

by him to the French Academy and to the president of the British Board of Agriculture in 1798. Mr. Jefferson's thoughts were first drawn to the subject in 1788. Travelling that year in Lorraine, in France, he frequently alighted from his carriage to watch the operation of the ploughs in use in the fields, and, as a result of his observations, entered, at the time, the following in his diary: "The offices of a mould-board are to receive the sod after the share has cut under it, to raise it gradually and to reverse it. It should be as wide as the furrow and of a length suited to the construction of the plough."

In his letter to the president of the British Board he elaborates this idea in description, and compares the action of the mould-board to the movement of two wedges, so combined as to present a curved surface. The function of one wedge, he says, is to lift so much of the sod, or slice of earth, as is necessary to the full height required, and the function of the other is to exert force laterally and obliquely to carry the sod so that its upper edge shall go beyond the perpendicular, that it may be inverted by its own weight. And he adds that the form of the mould-board must be such as to present in its passage the least possible resistance, and so require the minimum of moving power. His further proposition is that a mould-board of this compound-wedge sort can be constructed according to a mathematical formula and by a process so exact, that, in the hands of "any common workman its form will not vary the thickness of a hair." He gives in detail a mathematical analysis of the problem and a description of the method of manufacture. He has in mind in this description a wooden mould-board, and says that in practice it works well and that he has several such ploughs in use on his farms. In his communication to

the French Academy he said that it would be well, having by the process wrought out a perfect mould-board in wood, to use it as a pattern for producing working mould-boards of cast-iron, and expressed intention to have such made for his own use.

The difficulty everywhere had been that no two mould-boards were alike; that the most skillful plough-maker could not duplicate another's work, nor, "except by good luck," repeat his own successes; and that "when the makers of good ploughs died, their art died with them." The merit of the discovery made by Mr. Jefferson was recognized by both the institutions named. An authoritative writer upon the subject says that the credit to be given him must be restricted to his demonstration that ploughs could be made by rule, and to the actual discovery of one of the rules that are applicable to the formation of the mould-board.

In an official printed list of persons recognized as "original members" of the Massachusetts Society for Promoting Agriculture, appears the name of Timothy Pickering. At the date of the organization, and for many years afterwards, he resided near Philadelphia, and was also a member of the agricultural society of that place. One or two communications were received from him by the Massachusetts society at this period, and after he became finally domiciled in this State he was a frequent correspondent. He, also, was an observer and student of the plough, but bestowed the results of his thinking in conversation, and in letter writing to friends, as opportunity might invite, without distinctly claiming to be a discoverer of new principles of plough construction, nor attempting anything concrete in that line. In one of his letters he wrote thus:

My employments in the war of the Revolution having caused me to take my family to Philadelphia, I remained there after its termination. During four years I lived in the country and paid some attention to husbandry. One day, learning to hold a plough (a good Pennsylvania plough of that period), I observed that the earth, which was moist enough to be adhesive, filled the hollow of the mould-board and assumed a straight line from its fore-end near the point of the share, to its upper projecting hind corner, and that it maintained that same straight line. It then struck me that this straight line should exist in every mould-board and direct its curvature.

At a subsequent period when in Philadelphia, visiting Mr. John B. Bordley, vice president of the Philadelphia Agricultural Society, he handed me a small model of a mould-board which Mr. Jefferson had left with him. At first glance I saw the straight line before mentioned governing its form, and, asking Mr. Bordley's daughter, then at her needle, for a piece of thread, I stretched it from the lower fore part of the mould-board to its right upper overhanging fore corner. "Here," I said, to Mr. Bordley, "is the principle on which this mould-board is formed."

I have given this detail to explain the opinion I now express, that the straight line therein described is essential to the form of the mould-board of the least resistance. Around this line the curvature should be formed. And, by placing the lower edge or bottom of the mould-board on a level floor, if another straight line be laid transversely on the fore end or point of the mould-board and moved regularly back on its face, in a plane perpendicular to the horizon, it will touch the mould-board in its whole breadth, throughout its whole length, provided the curvature be correct. In a word, the curvature will be a portion of a spiral screw. Take a large screw augur for an exemplification. No earth can be left on such a mould-board; for every

succeeding portion of earth which the plough raises pushes off that which is on the transverse straight line behind it, and the face of the mould-board consists (is made up mathematically speaking) of an infinite number of such transverse straight lines.

The angle which the straight line should form with the sole of the plough is another material point, to be discovered by experiments, and experiments are also necessary to learn the proper angle of the essential straight line with the land side of the plough, or to decide where lies the just medium of breadth, of angle and length of mould board.

Col. Pickering does not give the date of his "learning to hold the plough," other than by saying that it was soon after the close of the war. His experience must have been nearly contemporaneous with that of Mr. Jefferson in Lorraine. It is noticeable that the two observers reached a like conclusion by starting, mentally, from opposite positions. Mr. Jefferson began with the thought that in the plough there were two diversely acting wedges, one to lift and the other to thrust. To blend these two into a properly hollowed or curved surface was his problem. Mr. Pickering began with the thought of the straight line in which the receding earth moved over the mould-board, and, in imagination, on that basis, shaped an ideal mould-board. When Mr. Jefferson's model was called to his attention he saw his ideal realized, and with reference to the straight line, exclaimed, "Here is the principle on which this mould-board is formed." But it was not so. Mr. Jefferson did not begin with a straight line and around it form the proper curvature, but began with the outsides of his two co-working wedges, and by mathematics, proceeded inward until the two were blended; and that blending proved to be the straight

line with which Mr. Pickering began. The coincidence was inevitable, since the reasoning in each case had reference to mathematical or geometrical laws.

This view of the matter is confirmed by a competent critic, a contributor to one of the publications of the New York Agricultural Society, who, in discussing the question of the degree of originality in a plough or mould-board pattern designed by Jethro Wood, a noted New York inventor, having pointed out what part of the design was original, says: "It is evident that Mr. Wood had no claim as the inventor of a cast-iron plough, because he had been anticipated in this by Newbold and several others. He could not claim the vertical straight lines, as he had been anticipated in these by Jefferson. He could not claim the transverse line, for Col. Pickering had laid down this line, long before him, on theoretical grounds, and Jefferson, without any theory, had adopted it in practice." It is manifest that this writer does not apply the word "transverse," descriptively, in the same way that Col. Pickering did; what he calls vertical lines are the transverse lines of Col. Pickering. Also, that in the expression, "Jefferson without any theory," he means, without any theory as respects the particular line.

The first development of plough-making upon the new principle, in this country, was made chiefly in New York and New Jersey. Besides Newbold and Wood, already mentioned, E. A. Stevens, David Peacock, Zadock Harris and Henry Burden, all of the same region, gained some celebrity as plough-makers or designers. Of the two explanations of proper plough-construction, as an abstract problem, that of Col. Pickering, using for a primary illustration the surface of an augur twist, rather than that of Mr. Jefferson, in which the illustration or comparison is to

the blending of a horizontal with a vertical wedge, seems more likely to be grasped by a practical or working mechanic; and it is not an unreasonable surmise that some of Col. Pickering's oral or written commentaries may have drifted across the Pennsylvania border and assisted those mechanics in elucidating and embodying the Jeffersonian idea.

The earliest of these plough makers was Charles Newbold of New Jersey, who, as remarked above, was the first to make a mould-board wholly of cast-iron. Prosperity did not attend him, because of a local superstition; for it is said, in reference to his plough, that "the farmers had in some way imbibed the strange notion that the cast-iron plough poisoned the land, injured its fertility, and promoted the growth of weeds." But towards the year 1817 Jethro Wood triumphed over this prejudice, and ploughs of his design had a very extensive sale. All these plough makers made certain variations from, or additions to, what the strict terms of Mr. Jefferson's description call for. Indeed Mr. Jefferson himself stated, subsequently to his first announcement, that he had so done in ploughs made for his own use. His object was to better the plough for his own farm work; theirs to achieve some improvement upon which to base a claim for a patent. But the main principle was held to, as appears in what was said above as to the degree of originality in Wood's plough. Of ploughs of the Wood's pattern nearly 7000 were sold in 1817 and the two following years, and of these more than 1,000 went, in the year 1818, to Virginia. In the period immediately following there is no reason to suppose that Virginia's annual purchase was less; and, if not the actual numbers, the general fact could hardly fail to become known to Mr. Jefferson, and must have been

a very gratifying circumstance of his declining years.

These New York ploughs, of one make or another, soon reached Massachusetts, and, judging by a description given in 1820, by a newspaper correspondent, who resided apparently in the south-eastern part of the state, it was high time. He says that in most parts of Massachusetts the Old Colony plough and the Sutton plough were still in use. The former he describes as having a ten-foot beam and a four-foot land side, and of the latter he says: "They are not fit to plough any land that has sod on it; your farmers' furrows stand up like the ribs of a lean horse in the month of March." And he adds, "The great objection to all these ploughs is that they do not perform their work well, and that the expense for blacksmith's work in repairs is enormous; six ploughs cost me last year an average of $6 each for repairs."

To return to the record of the society: In 1819 the following letter was addressed to its corresponding secretary, and, with its enclosure, was published in the next issue of the Journal:

BOSTON, September 1, 1819.

I received, early in the spring of this year, from Isaac Bronson, Esq., of New York, a plough denominated by him, "Freeborn's patent plough." Having found, upon trial, that it fulfilled all the expectations Mr. Bronson had previously raised concerning it, I requested him to write an account of its character and success. His letter is enclosed, which you are at liberty to publish should it be deemed useful.

Concerning its superiority I have had the opinion of every practical farmer who has witnessed its operation, I believe, without an exception. The effect upon my farm is this: that I now break up, with ease, the same quantity and qualities of land, say one acre, in a day,

with one yoke of oxen and one man, who both holds and drives, which was never before, to my knowledge, broken up with less than two yoke of oxen and two men. My ploughmen agree that it takes one-third less power to do the same work, than common ploughs require. One of them, to express his approbation of it, said, "that poor as he was, if another such plough could not be bought he would give $100, rather than not have it, had he a farm of his own." It is the best plough, beyond all question, I have ever had upon my farm.

Respectfully, I am your obedient servant,

JOSIAH QUINCY.

In the list, from which names of New York inventors above mentioned are taken, that of Freeborn does not appear. Some of these inventors sold to other persons rights to manufacture, and Freeborn may have been a purchaser and not an inventor. But that his plough was constructed on "Jeffersonian principles," appears clearly enough in an expression used in the letter enclosed, viz.: "The plough passes through the ground with very little friction and with much less draught than other ploughs of the same size, owing, probably, to the spiral wind in the plane of the mould-board." The phrase "spiral wind," though not used by Mr. Jefferson or Col. Pickering, would not have been rejected by either.

It cannot be doubted that Mr. Quincy's unstinted praise of the new plough took effect, and that the agricultural readers of the Journal, and many of their farmer neighbors, soon equipped themselves with that sort of an implement, by using two of which, the same number of men and oxen could plough two acres instead of one, or one acre in half the time.

That the stage now reached in the improvement of

the plough marked an extraordinary advance in the agricultural art is indicated by the concurrent approval, in foreign lands, of the new method of construction, by the two great institutions named, and the adoption of the method there, and by the sudden expansion, in this country, of the plough manufacture. The fact that ploughs of Jefferson's model are not now used does not affect the proposition that a great stride had been made. What was then solely sought for, both in America and Europe, the plough that with the minimum of power would best invert the sod, had been obtained. A plough that with less economy of power should serve also to break or disintegrate the sod had not then been asked for. Herein, in part at least, lies the explanation of the circumstance that after the year 1818, during a period of twenty-two years, the Massachusetts society offered no premium "for the best plough."

The cattle show of the Massachusetts society at Brighton, in 1816, though the first held in this section of the State, had been anticipated in date by the Berkshire County Agricultural Society, whose first exhibition took place in 1811, at Pittsfield, and was thereafter an annual event. This priority appears to have been a matter of considerable pride on the part of members of that society, who somehow interpreted the congratulatory reports of the Massachusetts society, respecting the series of shows begun at Brighton, as having a tendency, if not a purpose, to diminish their own just renown. The Berkshire movement owed it origin wholly, and its success largely, to the ardor and energy of Elkanah Watson of Pittsfield. He had travelled considerably in England and France, and had observed the popular appreciation of cattle

shows and fairs there, and he possessed the somewhat rare faculty of being able to infuse into those associated with him a large measure of his own enthusiasm. There is some reason for supposing that at that period there was a stronger community feeling in Berkshire than in any other considerable section of the State. At any rate, the cattle show prospered there from the start, and its success made an impression on the public mind wherever the fact became generally known.

In 1823 John Lowell who had been the corresponding secretary of the Massachusetts society from 1806, became its president. In the first issue of the Journal after his election he gave a somewhat extended review of the society's transactions, with a purpose to vindicate it against various unjust aspersions. He thus adverted to the Berkshire society:

> But it has been intimated that this central society had arrogated to itself merits, to which it was not entitled; that it had been tardy to do justice to the great and meritorious exertions of the Berkshire society. This is unkind; we have always been prompt to acknowledge the early, efficient and intelligent efforts of that society. We have admitted that they were the first to give a spring to agricultural efforts by introducing the British and French system of public shows of cattle and manufactures. Still, too much must not be claimed on this score. It was not an original thought. Many of us had visited the European shows, and the subject of introducing them had been discussed, and there can be no doubt, that long ere this, they would have been in full operation from the successful effect of European example. This is not said with a wish to diminish the merit of Mr. Watson, Mr. Gold, Mr. Melville, and Mr. Mackay, and the other "gentlemen farmers" of Berkshire. We know

and acknowledge that they have done everything in their power to promote an enlightened and improved course of agriculture, and surely they may be contented with this merit, without wishing to deprive other societies of their humble share in this common cause.

The character of the witness sufficiently supports the statement; but one who should critically read the early records of the society, though pursuing his task in an "unkind" spirit, would be persuaded, that, whatever motives had sway with the board of trustees, neither pretence of self-importance nor pride of section was among them. They gave place, at once, to anybody who would lead the way, whatsoever the distance or the point of the compass from which he approached. No clergyman could be so obscure in fame, or pursue his calling so remote from towns, but that his discourse, if befitting to the hour, found place at the earliest opportunity in the society's periodical, and himself prompt award of its first premium. Did scientific merit manifest itself in distant "Down East?" It was welcomed and rewarded, and given opportunity and scope in the gardens of Harvard College. Was it ascertained that a New Hampshire man had made a more excellent churn; that a Vermont man had superior knowledge about raising barley and brewing farm-house beer; that a Connecticut man had shown special enterprise in importing better sheep; that a New Yorker had produced the ideal plough? Though not specifically chartered to that end, the society sent its medal or other encomium across the State border in each instance, precisely as if the inventor or discoverer had lived within sight of the State House dome. No dubious thought about local pres-

tige was entertained. It was enough that somebody had appeared who could lift the torch, for the enlightenment of the agriculturalists of Massachusetts, a hand-breadth higher. All this being so, it is not supposable that the society had any peculiar jealousy about the doings at Berkshire.

If the western end of the State was willing to lead off in trying an experiment, no doubt the east and the centre took pleasure in the fact, with a purpose to copy, should the experiment prove successful. That it was an experiment sufficiently appears in the accounts given by Mr. Watson himself of it, and of his tremulous apprehension lest certain phases of the enterprise should fail of popular approval and support. Although such shows in England, guided and patronized by dukes and earls, and perhaps princes of the royal blood, had been successful, it did not necessarily follow that the results would be the same in dealing with the plain farmers of Massachusetts. One bent on finding something hidden or disguised in the motives to action or non-action on the part of the trustees of the Massachusetts society might better, perhaps, search in another direction. In its early history the society had prejudices enough to overcome, and epithets enough to endure without exposing itself, needlessly, to the embarrassment of the one or the other. The proposal to give a cattle show was first made to its trustees, and discussed by them, in 1801. Amidst the hot politics that raged, during the following decade, it may have been apprehended that any step, of the kind proposed, would be declaimed about as an attempt to introduce "a monarchical institution." But after the republican farmers of Berkshire had set the example, that fear, if it had existed, ceased.

The suggestion made in 1801 was that the show

should be given in Cambridge; but when, in 1815, a decision was arrived at, Brighton was chosen, as being already of fame as a rendezvous for farmers at its cattle market, a fame which dates as far back as 1775, when it was made the headquarters, or place of assembling, of cattle and other stores of the commissary department of Washington's army, then besieging the town of Boston. The patriotic associations of the place, though doubtless appreciated, had no influence upon the decision of the trustees, but rather, the fact that the premium cattle of the show would find ready sale, if offered, at the contiguous market, and that the hotel accommodations were ample.

The exhibition of 1816 comprised only neat cattle, sheep and swine, first and second premiums being offered in each classification, the total of premiums being $290. The cattle pens were ranged along the south side of the main road, now called Washington street, opposite to the Cattle Fair hotel site of modern times, and within the enclosure then called Winship's pasture. Nearly one hundred animals were in the collection, of a quality, as a whole, very satisfactory to the trustees, who expressed opinion, in their report, that the show would have been regarded creditable at Smithfield, Lewes or Bath in England. The exhibit of Merino sheep was of especial merit; but the marked triumph of the day was a milch cow, belonging to Caleb Oakes of Danvers, and for which the first premium was awarded. This animal had yielded, in twenty weeks, milk for making 320 pounds of butter, and when milked upon the field, at Birghton, the yield was nine quarts. Opinion was generally expressed that the cow was unrivalled in America or Europe.

The society had a portrait of the animal painted by a celebrated artist.*

The day was pleasant and the throng of spectators very large. Among the guests were the Governor of the State, Gen. Humphreys, president of the Connecticut Agricultural Society, Commodore Bainbridge of the United States navy, and Admiral Coffin of the British navy. It had been intended that the public exercises should take place in the Town Hall, but this proved too small for the eager audience, and an adjournment to the Brighton meeting house was made. This building is still standing at the corner of Washington and Market streets. In these exercises were comprised an address by President Dexter, of the society, and the reading of a report by Secretary Lowell. During the day the society and guests dined at Hastings' tavern, which was on the site of the modern Cattle Fair hotel. The custom at the cattle-show dinners of early date, was to provide a set of regular toasts or sentiments, and persons called upon responded, each with his own sentiment, and not with a speech. Among the volunteer or responsive toasts on this first occasion were the following:

The ox—the richest domestic gift of nature to the citizen and the farmer.

The fine-wooled and coarse-wooled sheep — Heaven's next best gift; may we remember their merits, when the glass is below the cipher, and not lay on their backs the folly of our own speculations.

The best blessings to any people, a learned and pious clergy; may they practice what they preach and learn to differ as though they differed not.

* The whereabouts of the portrait is at present unknown to the present trustees, who ask for information that will enable them to find it.

A speedy end to the farmer's three banes, mortgages, dram-shops and a violent thirst for politics of any sort.

The editor of a Boston newspaper of the day said of the event: "It was pleasant to witness on this occasion the total absence of party feelings and political prejudices. The lion and the lamb lay down together. Public utility was the order, and rural felicity, the sentiment, of the day." The report read by Mr. Lowell gives some hint of the antecedent considerations governing the action of the trustees. It says:

Those opposed to the plan of a cattle show may ask why the society should waste its funds in a scheme, the tendency of which may seem to them to be only to multiply the days of festivity and idleness, already too frequent, and to endanger the morals of the citizens by collecting them together in a situation, and under temptations, unfavorable to correctness and sobriety. We are not unaware that such collections of people may be subject to some evil. But when we recollect upon how many less interesting occasions, and among those some of questionable utility, the people are called together, in which the principal effect upon some would seem to be to sharpen still more the asperity of party feelings, and to widen still further the breaches in our community, it would appear to be a sufficient apology to say,—let us unite in one object in which division and irritable feelings can find no room for exercise, in an assembly the sole end of which is the promotion of the good of the whole community, and the advancement and prosperity of the whole state.

The report further says that cattle shows had their beginning in Great Britain; that this example soon reached the Continent, where its success, if not equally great, had at least been considerable; that one induce-

ment which led the trustees to take action, had been the accumulation of society funds, through failure of due response to premiums hitherto offered, the payments of premiums having mostly been for importations of improved breeds of sheep; that in now turning its attention to the improvement of breeds of domestic animals the society was following the example of Europe and of the Berkshire County Society of this state; that the premiums now offered amounted, in most cases, to more than one-half the value of the animal, and in some cases to the full value, added to which inducement, was the certainty of a better sale for cattle, for which premiums had been awarded; and that the reason why premiums for horses had not been offered was that the use of horses for agricultural work was small in this country, as compared with foreign lands, and the prices were already high enough to encourage their breeding and improvement, "higher than in any quarter of the globe with which we are acquainted, where this animal is raised."

The cattle show of 1817 excelled its predecessor in many respects. The amount of premiums offered was $1300, of which $500 was granted by the Legislature. Three premiums instead of two were offered in the classes of native cows, fat oxen and working oxen. For sheep there were eight premiums; for native bulls, two; for imported bulls, two; for imported cows, two; also a premium for the most wheat raised per acre; the most turnips per acre; for any superior vegetable or grass; for the best threshing machine, the best seed-sowing machine, the best plough, the most successful use of the drill plough, and for any other agricultural invention deserving a reward. Other permiums were for manufactures from wool of native sheep and from cotton, the classification being of factory-made and

home-made. A ploughing match was provided for, the first that had occurred in eastern Massachusetts, the total premiums therein being $56. The show continued two days, October 14 and 15, the ploughing match taking place on the second day.

An assemblage of more than 4000 persons was attracted to Brighton on the first day to behold these promised wonders; for they were such, then. Many came from New Hampshire; and other places, less distant, had representatives and observers on the ground, all of whom on returning home had something to say of the eulogistic character, which was helpful to the society in the direction of "promoting agriculture." Any number of agricultural tracts distributed over the same area would doubtless have done far less; not but that such tracts were useful, but the multitude of that period would not ponder and read them. On the first day more than 600 carriages were standing about the streets of Brighton village. Huckster's booths and tents, which had sprung up like Jonah's gourd, occupied the various points of vantage, and all things took on a holiday aspect. The animals exhibited occupied sixty pens, which were stretched along the present Washington street, within the Winship pasture, from the present Chestnut Hill avenue nearly to Foster street. The Town Hall, which then stood on the south side of Washington street, 350 feet east of Chestnut Hill avenue, was used to exhibit manufactures, agricultural machines and tools, and vegetables. The public exercises took place in the meeting house and the other proceedings were similar to those of the preceding year. A Boston newspaper editor of the period pronounced the exhibition to have been "splendid and gratifying."

This display of animals, which, by the official and

other reports, was of great merit, was notable in two particulars, especially, the pair of mammoth fat oxen from Springfield, and the Westbrook heifer. They took the highest premiums, and, by vote of the trustees, paintings of the three animals were procured for the society. Measurements of the oxen were taken for comparison with those of the most celebrated English ox of that day, known as the Durham ox. A part of the figures given of the larger American and the English ox are the following: American, height at the shoulders, 5 ft. 6½ in.; length from nose to end of rump, 11 ft. 3½ in.; greatest girt, 10 ft. 1 in.; English, height, 5 ft. 6 in.; length, 11 ft.; girt, 11 ft. 1 in. The comparative weights are not given. The larger American ox weighed 2,784 pounds, and the smaller, 2,320 pounds. The age of the pair was 6½ years. The Westbrook heifer was notable as being the first adequate public demonstration, under the auspices of the society, of the great gains possible through judicious breeding. The heifer was partly of native, but chiefly of English pedigree, the English breed being that of the celebrated cattle breeder, Robert Bakewell. At the date of exhibition the animal was 21 months old and weighed over 1700 pounds. At six months old its weight was 600 pounds. In form it was regarded superior to anything that had been seen of the same class in this region, and besides the painting, the trustees had an engraving made and published in the Journal for January, 1818.

Another notable affair, though not eligible for a premium, was a pair of women's shoes exhibited by William Furnald of Charlestown, as evidence of the rapidity possible in the work of manufacture. On the first day of the cattle show between the midnight hour and one o'clock A. M., a goat was slaughtered at Mr.

Furnald's factory. The skin was removed, and before eleven A. M. had been properly limed, cleansed and tanned. Before one P. M. it had been wrought into black morocco leather, and by 2.30 P. M. the pair of shoes was finished and Mr. Furnald started with them for the Brighton show grounds.

With reference to the exhibits of superior animals, the official report makes the following remarks which are historically instructive, in showing the facts of that day as to breeding:

It is to be desired that our citizens and the world should know that there exists no description of domestic animal of which Massachusetts cannot produce a specimen equal, if not superior, to any in the most cultivated regions of Europe; but the general state of the breeds of our animals is far inferior to those of some countries. Our whole State cannot produce as many fine cattle as are exhibited in one week, at Smithfield market, on ordinary days. Yet, in instances, we have the best. The milch cow of Mr. Oakes, which took the premium last year is probably, in point of productiveness, superior to any animal in the world. The oxen offered this year from Springfield, and the heifer from Westbrook, it is believed, are superior to any animals of the like description existing anywhere.

With reference to the ploughing match the same report says:

We have before us accounts of five celebrated ploughing matches in England, the showing of which is that the labor was performed by every one, even the slowest, of our ploughs in nearly one half the time taken to perform the same work in England. There was another circumstance in the ploughing match

which gave us pleasure, as evincing a strong desire for improvement. There were no two ploughs out of the twelve alike. They were all of them uncommon, and had some peculiarity of modern invention.

This dissimilarity, and individualism in improvement, was not destined to continue long, for the reason, that will occur to the reader, that in the spring of the year 1819, Mr. Quincy was to drive his team afield with a New York plough attached, and, in the autumn, to announce, whether, consciously or not, the beginning of a new era in ploughing.

The year 1818 was entered upon by the trustees with hope and confidence. They could but mentally assent to the newspaper's panegyric upon their recent fair, as splendid and gratifying; and this gratification arose in part only from the thought that their endeavors had been sustained by the farmer contributors, and had proved popularly acceptable. Its other source was in the perception that they now had a new instrumentality, through which to reach, and incite to better things, the conservative and somewhat incredulous tillers of the soil. For them, henceforth, to see and to believe might be happily joined. Early in the season a committee of the board opened negotiations with the selectmen of Brighton, looking to the permanent establishment of the cattle show in that town. They suggested to the selectmen that in whatever town they should locate, they should expect from it the gift of half an acre of land, on which to set an agricultural hall, and the use of four acres, near at hand, during six days in October, each year, for the placing of cattle pens and the convenience of spectators, having already had a proposition to that effect made to them in a neighboring town. A town meeting

was held in Brighton, on June 8, and a committee was appointed. The committee was able to report at the adjourned meeting of June 15, that two offers had been made of gift to the town, as desired.

One of these was from Samuel W. Pomeroy, who proposed to grant the half acre on either side of the road near his tavern, and the use of a field of ten acres opposite to the tavern. This building was known as the Bull's Head tavern and stood on the northeasterly side of the present Washington street, 1,000 feet from Cambridge street, and 400 feet from Union street. The ten-acre lot was within the area now bounded by Union street and Lexington avenue. The other offer was from Abiel Winship, of a half acre in the middle of his pasture, already referred to, and a roadway to it, with the use of four acres in such part of the field as he might choose, from time to time. The thanks of the town were voted to each of the two citizens, and the committee was directed to submit the two offers to the trustees of the society. They chose the Winship premises, as being more central in the village, and the half-acre lot being, as the committee of the trustees express it in their report, "on elevated and beautiful ground, commanding an extensive view." The deed of Abiel Winship to the society is of date, July 23, 1818, and has conditions that in case the premises cease to be used for a cattle show the land shall revert to the grantor; also, that the erection of booths, tents or buildings upon either the half-acre or the four-acre premises, for the vending of liquors, refreshments or articles of any description, shall be subject to the approval of the grantor. There is a stipulation that the agricultural hall shall belong to the society in any event.

The boundaries of the half-acre lot have been ob-

literated by the conveyances of later times; but a distinct landmark appears in the public highway, now called Dighton place, but, prior to annexation, Winship place. This roadway, though originally four rods wide, was the avenue of approach from Washington street to the half-acre lot. The building erected by the society was known as Agricultural Hall, and it stood in the centre of the half-acre lot. Its site is within the open area that makes the upper end of Dighton place, in front, or north of the Bennett primary school house there. The position of the south end of Agricultural Hall corresponds very nearly with that of the north end of the school house. The hall stood upon or near the height of land, and the whole extensive tract about it thereafter took on the name of Agricultural Hall. Many years afterwards the society obtained a deed, from the administrator of the Winship estate, of three and a half acres, adjoining the half acre tract, so phrased that it could convey a good title to the whole, without conditions. It sold the land to Stephen H. Bennett, who made a donation of the school house lot to the town of Brighton.

Agricultural Hall was a structure of 70 by 36 feet, ground dimensions, and two stories high. The lower story finished at twelve feet height, and the upper at ten feet and seven inches. In the upper hall were hung various paintings and engraved pictures, illustrative of agricultural matters. The building was constructed during the summer of 1818 and occupied by the society for the show of that year. No ceremonies of breaking ground or dedication took place, but, in conformity to the usage of that period, all stalwart and willing citizens were invited to be present on August 25, when, as appears by the society's cash book, the sum of $10 was paid "for liquors for the

raising." Within this building, annually, to 1835 (including that year, but excepting 1831 and 1834), were displayed those various farm, household and factory products, which contribute to make up the typical agricultural exhibition. In front of it each year, on the chief festival day, the members of the society and guests were formed by the society's four marshals, in procession, and moved down the broad avenue to the main street and to the meeting house, keeping step to the martial notes of drums, fifes, clarinets and cymbals. In the meeting house the annual address and other public exercises took place. For some years after the first occupancy of the hall the cattle pens were aligned as in 1816 and 1817 along the roadside, but latterly the southerly slope beyond the crown of the hill, and south of the hall, was set apart for the purpose. There the sight-seeing throngs stood and gazed in pleasant October days upon the assembled herds and flocks, or, becoming weary of that, and of the curiosities arrayed in Agricultural Hall, strolled about the "beautiful and elevated grounds," and viewed the "extensive prospect." Agricultural Hall was removed, after the sale of the society's land in 1844, to the easterly corner of Chestnut Hill avenue and Washington street, where it still stands, substantially unchanged, and is used as a store.

The exhibition of 1818 comprised a much larger number of animals than either of its predecessors, and was superior also in respect to their average quality. The attendance of spectators was equal or greater. At the society's dinner 200 persons sat at the table. The lower story of the agricultural building was used for exhibiting farming machinery and implements and mammoth vegetables; the upper story for manufactured textiles and other light goods. The successive

exhibitions, for many years, presented no important new features, but the festival annually increased in popularity, and this notwithstanding the attraction of county society shows, which had been organized. The show of 1821, for example, had more than 100 neat cattle, and more than 300 animals in all, and this, as the official report says, "notwithstanding that three very respectable county societies had sprung up full grown in our immediate vicinity." The newspaper report of this show says that Agricultural Hall ought to have been twice as large to accommodate all that wished to see excellent things therein. Of the series of shows a few peculiarities are mentionable. That of 1818 had, for one of its exhibitors, the indefatigable Charles Vaughan, of Hallowell, one of the charter members and original trustees of the society. He exhibited a superior boar and took the first premium. In 1819 a fat ox from Waltham was in the show, weighing 2798 pounds. At that time the newspaper reporting, excepting what related to market prices and shipping, was usually done by the editor, who was not to be drawn out of his sanctum unless something specially important was going on. The editor of the Boston Sentinel evidently speaks as an eye-witness of the show of 1819, and, after mentioning the great crowds and whence they came, says, "Many came by the way of the Mill-dam corporation's bridge, and had a short but pleasant walk and opportunity to witness the progress made in an enterprise so vast, and which promises to be of much public utility." The enterprise alluded to, as will generally be apprehended, was not that of the Agricultural society, but of the Mill-dam corporation. In 1821 a fat ox from Hatfield was exhibited, weighing 2573 pounds. The official report remarks upon the great improvement manifest in

specimens of swine, proving that the advantage of careful breeding was becoming generally understood. In 1821 the total of premiums offered was $2,000. As usual, some were not competed for, but the total payments for premiums were $1,244. A new manufacture was exhibited by the inventor, John Johnson, of Marblehead, namely, seines and herring nets of cotton twine, which were preferred by the fishermen of Marblehead to those of hemp, whether of American or foreign manufacture. A premium of $10 was awarded. The superiority of the progeny of various animals of choice foreign breeds now exhibited was officially noted.

In 1822 persons were present from all the New England states and some of the southern states. In 1823 a Sicilian squash three feet long, raised at Brookline, from foreign seed, was shown; also ears of corn 14 inches long, raised in Roxbury, from seed obtained in Missouri; also large onions from Tripoli seed; also elderberry wine, of which the official report remarks that "it is reputed to be very wholesome," seeming to signify that it was a new thing, or at least not familiarly known. In 1824 a pair of fat oxen from Shrewsbury, weighing 5000 pounds, were in the exhibition; also a mule. In 1825 a plough was exhibited with a "self-sharpening point," the sharpening being effected by reversing the piece when it became worn. The official report of it says, "Your committee had no evidence of the instrument's having been used and approved by practical farmers, and therefore do not deem it within their authority to grant a premium." In 1826 a satisfactory threshing machine was exhibited, which, with horse-power, in seven hours, would thresh 203 bushels of oats. In the official report the trustees renew their declaration in favor of cast-

iron ploughs, and say that although they cost more at first they are cheaper in the end. In 1827 one of the committee on milch cows was "Thomas Williams of Noddle's Island," a localization which sounds queer now, but did not then. In 1828 the official report speaks with congratulation upon the fact that of 12 ploughs, in the single-yoke ploughing match, 10 were of cast-iron, and that in the double yoke match six of the nine ploughs were cast-iron. In another official report of this year something of protest appears as to a proposed repeal of the law, by which the society had an annual grant from the State; and it is remarked as showing that the grant is not one for local benefit, that "three-fourths of the society's premiums are dispersed in countries not contiguous to the capital." In 1829, among the animals exhibited, were three jacks or male donkeys.

In 1830 the effect of the counter-attractions, which the county societies were able to offer, became manifest in some degree; for the show of animals was smaller than during many preceding years. It was excellent in quality, however, and the official report remarks that in the pens "there was scarcely one animal of pure native breed of cattle, sheep or swine." The attendance of spectators was about as usual—that is very large; and, as previously, the festival amounted to a general holiday for Brighton village. It was notable also as being the day of first occupancy, by any large company or society, of the famous Cattle Fair Hotel. An account of the festival says: "The society dined in the lower hall of that spacious and elegant building, the Cattle Fair Hotel. Although the hall was unfinished it was very beautifully decorated with flags and banners, surrounded by the graceful pine and larch, and the posts entwined with ever-

greens." Some hint that modern times, in the day of agricultural tools, were approaching, will appear to many readers, in the statement, that among the articles shown in Agricultural Hall, were ploughs of iron, from David Prouty, of Hanover, and from Nourse & Co., of Sherburne. There was no diminution of interest in the ploughing match, either as respects the competitors or the spectators. For the match with two yoke of oxen, eleven competitors entered, a larger number than on any previous occasion. In fact more desired to enter, there being thirteen teams present. Only eleven lots had been measured off and two teams had to be set aside. In regard to both the single and double-team matches, the committee of awards report that they gave express instructions to the ploughmen, that the teams should not be hurried, and that shortness of time was no object in comparison with good work. In the earliest ploughing matches time had been an important element in the decision.

A departure from this standard was announced in the programme for the show of 1825, and now, in 1830, the new standard appears to have been rigidly insisted upon. This change of standard is doubtless traceable to the performance of a team and ploughman in the ploughing match of the year 1819. The plough was entered for the competition by Josiah Quincy, and no doubt the ploughman followed his instructions. On that occasion the single-yoke and double-yoke teams competed together. Mr. Quincy's team was a single yoke. There were six teams. The three double-yoke teams did the work in 38, 42 and 43½ minutes, respectively. The two single-yoke teams did it in 55 and 55½ minutes, respectively. Mr. Quincy's team did it in 1 hour and 49 minutes. All

the lots were, of course, of the same size. Doubtless the committee found their pre-conceptions to be rather shaken up; but after due cogitation and looking over the ground, they made up their report to read: "In considering the performance of Mr. Quincy's plough, your committee were constrained, in some measure, by their construction of the terms on which the premiums were offered (viz., "the best work with the least expense of labor,") to place time against good work, as the work of this plough was unquestionably the best in the field, and the team under exemplary discipline." Accordingly, Mr. Quincy, notwithstanding the lateness of his team in arriving at the end of the last furrow, was awarded the third premium. It may be remarked, with a view to add desirable definiteness to this record, that from the beginning, the ploughing matches took place on some field a short distance away from what may be called the show grounds. Prior to the building of the Boston and Worcester railroad, a field near Market street, now crossed by the railroad, was used, and on some later occasions the ten acre lot opposite to the Bull's Head tavern.

In 1831 the cattle show was omitted. In making the announcement, the trustees speak of the satisfactory results which had been attained through the cattle shows of the society during the preceding fourteen years, more especially in respect to stimulating better practices among the farmers in the breeding of neat cattle, sheep and swine. To this, they say, the shows of the county societies have contributed greatly, and will continue to be effective in that way. This favorable state of things, they say, will justify the application of the society's funds to other important objects. They therefore propose to continue the usual pre-

miums for farm management, orchards, largest crops per acre, etc., and to give an exhibition of butter and cheese on December 7, in the rotunda of the New Faneuil Hall market building, in Boston. This announcement, though rather ominous as respects the permanency of the Brighton cattle show, did not prove immediately fatal. The people of Brighton were much dissatisfied by the interruption, and the leading farmers in counties south of Boston, where no shows had been established, joined in protesting.

In 1832 the show was resumed at Brighton and proved to be an event of considerable magnitude, though not equal to many of its predecessors. The report of the trustees in regard to it remarks upon the increased interest manifested, all over the State, in agriculture and in exhibitions made for its encouragement. At this exhibition an award was made for one novelty, which, though an humble affair in the province of agriculture regarded as a whole, was, and continues to be, of much importance in seashore farming towns, where salt-marsh hay is extensively harvested. The official report on the matter was as follows: "Ira Draper of Saugus, entered for a premium, mud shoes, to be used on horses' feet in wet, soft and marshy ground, by use of which horses in light wagons, with suitable wheels as to width, can remove hay with much greater despatch than in the usual mode with carts and oxen, and not poach or cut up the ground. They were recommended as having been used to great advantage, in certificates from Mr. Oliver of Saugus, and Joseph Harris of Chelsea. The committee award to Mr. Draper for his mud shoes, $5." In the ploughing match of 1832, a premium was offered for the best plough. This however requires no modification of a foregoing statement, that for twenty-

two years after 1818, no premium for the best plough was offered. The offer now made was obviously to induce competitors to use the most efficient instrument obtainable, in order to achieve, for the credit of the society, and for the instruction of the by-standers, the most perfect result in the way of a ploughed field. It is quite possible that there were better ploughs in Agricultural Hall in 1832, than any on the field, but they got no premium.

The show of 1833 is described as having been of merit and attractiveness, with fewer cattle than usual in the pens. Although the day was cloudy and rainy, there was a great concourse of people on the grounds. The official organ of the society at that time, the New England Farmer, comments thus upon the situation, and there is no reason to doubt that it is a just judgment: "The principal cause of a diminution of cattle exhibited at Brighton, may be found in cattle shows of other parts of the State. Another cause may be that fine animals have become so common that they are scarcely considered as a rarity. Excellence ceases to be remarkable when it becomes general." Another consideration is to be kept in mind, for a proper understanding, at the present time, of the decline and cessation of the society's annual exhibition, which, for many years was probably not exceeded, if equalled, in its magnitude and quality, by any like demonstration in this country. Even as late as 1835, railroads were in their veriest infancy. The few then existing in Massachusetts had no proper facilities, if their managers had any disposition, to undertake the transportation of farm animals to and fro, nor did they provide frequent conveyance for passengers. Spectators in sufficient numbers appear to have been within call. The real difficulty was with the cattle, using the word

to mean all farm animals. These had to be brought and returned on foot or in farm wagons, over long, and so, impracticable roads. Thus the shows flourished best away from the vicinity of the metropolis where the cattle were few, in the districts where they were numerous.

One more and a final effort was made to keep up the annual holiday at Brighton. No cattle show was held in 1834, but a butter show was given in Boston. In 1835 the last of the cattle shows took place, and in many respects was a notable affair. Among the exhibits was a bull and three cows of the Ayrshire breed, which had been imported by the society at a cost of $1,175. Among the notable men present at the society's dinner, some of whom were members of the society, were Lieut. Governor Armstrong, Daniel Webster, Edward Everett, Judge Story, Abbott Lawrence, Gen. H. A. S. Dearborn, ex-Governor Lincoln, and Dr. Julius of Prussia. Each of these made a brief speech at the dinner. Daniel Webster became a member of the society in 1822, and in 1833 was chosen one of the trustees. At the cattle show of 1835 he served the society in another capacity, which is denoted in the toast by which he was called up for a speech after the dinner, viz:

Our senator in Congress, and chairman of the committee on bulls, milch cows and yearlings.

The record sustains the averment of the toast, for the report, for the year 1835, of that classification of animals is signed by Daniel Webster, Asa G. Sheldon and Elijah Perry. On another occasion, the society dinner of 1832, Mr. Webster had been recognized in the double capacity of a distinguished statesman and

a practical and zealous farmer. This was the first time the society had met at dinner subsequent to the delivery of Mr. Webster's celebrated speech in reply to Hayne. The toast of that dinner of 1832 was:

Our senator in Congress — a New Hampshire farmer; though he generally manages more by the voice than the goad, he can, on proper occasions, take the bull by the horns.

At the successive annual dinners, many witty and pertinent sentiments were produced. Among them a few seem to retain something of their original sparkle, despite the lapse of time. At the dinner of 1824 the following was offered by Col. Timothy Pickering:

The free-masonry of agriculture, which finds a brother in every clime.

On the same occasion Gen. H. A. S. Dearborn proposed the following:

The memory of Blackstone, who designated the site of Boston, and planted the first orchards in Massachusetts and Rhode Island.

At the dinner of 1825 the following was among the regular toasts:

The memory of the great unknown, who invented the first plough; and honor to Mr. Jefferson, one of the principal improvers of that indispensable implement.

In 1832 among the guests were Mr. Audubon, the renowned ornithologist, and Dr. Spurzheim, the

originator or discoverer of phrenology. These two sentiments were offered at the table:

Our scientific countryman, John James Audubon—the flight of the eagle is not beyond his reach, nor the tenants of the poultry yard beneath his notice.

Our honored guest, Dr. Spurzheim—he reveals to us the secret import of our "bumps;" we greet him with a bumper.

The record indicates that the society's dinner usually took place at the Dudley Tavern. This stood opposite to the junction of the two roads now called Cambridge and Washington streets. The city of Boston is building at the present time a police station upon the site of the ancient inn. The spot is about 700 feet east of the meeting house, so that on these occasions the procession was re-formed after the public exercises were ended, and the march was continued to the place of dining, giving the drums, fifes and other instruments a second opportunity to electrify the throngs that occupied the wayside. In a few instances the dinner was given at the Bull's Head tavern, adding about 1,000 feet length to the route of procession. The charge for dinner tickets was sometimes $1.25 and sometimes $1.50, each. Probably the table was more abundantly spread on these high-priced days. Among the society's dusty files may be found a manuscript, which evidently served as a standard or model for preparing, annually, a written bill of fare as copy for printing, and also for making a draft of a contract with a caterer. The list of viands, as thus displayed, may prove interesting to those having in charge similar entertainments at this period, and to others who may like to be put in a way to judge

whether the same advance has been made in this, as in other departments, of agricultural activity. It is as follows:

Bill of fare for the dinner at the Cattle Show of the Massachusetts Society for Promoting Agriculture:

Legs of mutton, boiled. Chickens, boiled.
" roasted. " roasted.
Beef, roasted. Turkeys, boiled.
" a la mode. " roasted.
Pigs roasted. Geese, roasted.
Hams. Ducks, roasted.
Oyster Sauce.
Cranberry sauce. Jelly. Celery.
Pies. Puddings. Tarts. Custards.
Madeira wine—Cider.
Melons, musk and water. Apples. Pears. Grapes. Peaches.

Below this memorandum, on the same sheet of old manuscript, is the following:

Memorandum of an agreement made between —— of Brighton, of the one part, and the trustees of the Massachusetts Society for Promoting Agriculture, on the other part:

The said —— agrees to prepare and provide for the said society at their annual cattle show on the —— inst. an excellent dinner, agreeable to the above recited bill of fare, at the price of one dollar and fifty cents for each person, and to furnish fifty bottles of Madeira for every hundred guests, and in that proportion for as many persons as may be present; and that the wine shall be of a quality equal, at least, to the best wine sold by J. D. & M. Williams for $3 a gallon, and that everything provided, from the substantial to the lighter dishes, vegetables, fruit, etc., shall be of the best kind which can possibly be procured, and that the waiters shall be the best, and in numbers sufficient for easy attendance upon everybody.

Then follows a clause covering a guaranty on the part of the trustees that the caterer shall be paid at least a certain sum, to secure him against loss in the event of a stormy day and thin attendance.

Some hint has been given of the distinction of these occasions in the mention of names of eminent men. In this classification belong some of the members of the board of trustees; and all were men of note. Mr. Webster, after he became a trustee, was probably regularly present at the festival, though not always mentioned in the curt news reports of that period, which, in some years fail to give any names of guests. Col. Pickering and Judge Story were frequent attendants. Edward Everett, then known as Professor Everett, appears to have been regarded as indispensable, in the after dinner proceedings, after his first appearance in 1822, though he did not become a member of the society till 1850. The Governor usually represented the State, and, in his absence, the lieutenant governor, and sometimes both were present. The judges of the highest State court were among those regularly invited. In 1818 John Adams, ex-president of the United States and also of the society, was a guest. As coming from distant places are mentioned from time to time Judge Buel of Albany, Judge Smith and Hon. Francis Granger of New York, Hon. Matthew Carey of Philadelphia, Hon. Mr. Calvert of Maryland, J. S. Skinner of Baltimore, William Crafts of South Carolina, Mr. Lee of Virginia, and others as delegates from agricultural societies in New Hampshire, Connecticut, Maine, Pennsylvania and Canada. In 1816 Commodore William Bainbridge was a guest, his laurels still fresh that he had won upon the deck of the frigate Constitution, and in 1820 Commodore Isaac Hull, with like laurels, won upon the same vessel,

when he was its commander. It seems to have been the practice to extend an invitation to the commander of any naval vessel in the port of Boston, at the time, whether of the American or other nationalities. In 1827 Capt. Basil Hall of the British navy, and General Coffin of the British army were present. Doubtless the list might be much extended had any record been kept. The British consul was an occasional or frequent guest, and, that no other consuls appear to have been, is probably attributable to difference of language, whereby the convivial wit and oratory had a lesser attraction for them. That these abounded there is ample evidence; but everything was done in the New England fashion. It is recorded of one of the dinners that Rev. John Foster, D. D., of Brighton, asked the blessing before the banquet, and Rev. John Pierce, D. D., of Brookline, offered thanks at its close. This was, no doubt, in conformity with the usual order of proceeding.

It may be remarked that, while, as respects the dignity of these occasions, the presence of leading citizens and intelligent agriculturalists of distant places is testimony, in its proper degree, it is significant also as showing that the reputation of the society's exhibitions was widespread; and a reasonable implication would be that the society's influence for much or for little was co-extensive. These visitors were in a sense envoys—self-appointed, indeed, some of them, or perhaps unconscious of having any such function. But when they returned home they made report among their neighbors as to what the men of bright wits and long purses in Massachusetts were doing to promote agriculture, what stage of advancement in the art the exhibition gave proof of, and what skill and what methods were requisite for success in holding

such exhibitions. And it cannot be doubted that, in instances, the instruction thus conveyed was promotive of agriculture in those far countries.

The public exercises in the meeting house were always opened with prayer, usually, if not invariably, by the Brighton pastor. The annual address in most instances dealt with such problems and demands of the agricultural art, as the stage of development reached at the particular time, might suggest. But much variety of treatment was possible, and so it happens that a part of the credit justly due to the Massachusetts society is for contributions made, through its orators, to the literature of eloquence. Three specimens, one in aim and effectiveness, but diverse as, perhaps, is possible in style, will illustrate this phase of the society's experience, and permit the reader to decide, if he can, which is the excellent orator, or, so to speak, where should be awarded the "premium."

In 1822 the address was delivered by Timothy Pickering. In one of the society's publications it was referred to in these terms; "Col. Pickering's address is said to have been too practical to suit the ladies, who had come in great numbers to hear him. It savored less of the flowers than of the compost from which they spring." The recorder confessedly obtained his information at second hand. Compost was, indeed, one of the topics. There is no mention of flowers, even of allusion. Nor did the orator indulge in so much as a flower of rhetoric throughout his long discourse, and varied from an inexorable plainness only in one slight touch of facetiousness. But of the chrystalline possibilities of English speech one might search far for a better example. He began as follows:

"It appears to be expected that at each of your anniversary meetings, a discourse on agriculture should be delivered. The trustees of the society have requested me to address you at this time. But though willing to be laid under contribution to the great object of your institution, it has occasioned a degree of solicitude to present something meriting your attention. From the multitude of books written on the subject of agriculture—embracing in that word whatever should employ the thoughts and labors of the skillful husbandman—the field would appear almost boundless; yet to select topics particularly interesting to the farmers of Massachusetts, and here to discuss them so as to communicate useful and acceptable information, was not unattended with difficulty. My address must necessarily be miscellaneous.

Philosophers and practical husbandmen have for ages employed their thoughts and their pens on the various operations in agriculture; yet diversities of opinion still exist, and the reasons of many of those operations have been little more than conjectural. What constitutes the food of plants has long been a subject of diligent inquiry. It was natural to suppose that if this food could be discovered, it could more easily be provided, or at least more efficaciously administered. The palpable differences which distinguish the immense variety of plants in their forms, textures, colors and tastes, naturally suggested the idea that each variety required its specific nourishment. Yet, it being a matter of common observation that the same soil would nourish and bring to maturity multitudes of different plants, of very opposite qualities—some yielding wholesome food and others a deadly poison—at the same time all growing together and robbing one another, a nobler and more simple idea presented itself—that the food of all plants was the same, but that each species was endued with the power of converting that food to its own peculiar substance; as, among animals, the same grain, produced all the varieties of flesh which go to sustain the life of man."

Having thus stated the problem, the speaker proceeded to his solution, which may be given in his own words, omitting a few connecting clauses:

"By the modern discoveries in chemistry, these mysterious effects seem to be accounted for. For it appears that all kinds of plants are composed of a small number of elements, whose different arrangements and combinations produce all the varieties in question. The three principal ingredients in the food of plants, and which, by them elaborated, constitute the food of man and

other animals, are named by chemists, carbon, oxygen and hydrogen; in other words, charcoal, vital air and inflammable air; and these exist in the air we breathe as well as in manures consisting of vegetable and animal matters. It may seem incredible that the thin air, an invisible matter, should be changed in the process of vegetation into solid substances, as wood and stone. But nothing has been more clearly ascertained than that in 100 parts of pure limestone, forty-five parts are fixed air or carbonic acid. This, in the act of burning the stone into lime, is expelled; for if at that time the stone be weighed it will be found to have lost so much of its original weight. It is also well known that this same lime, which, slaked with water or exposed to air, falls down into a powder, will immediately afterwards begin to imbibe fixed air or carbonic acid from the atmosphere, and eventually, though slowly, recover its original weight."

Having remarked that while the same food furnishes nourishment to a variety of plants, he said it is also true that plants have preferences among the variety of soils, and that soils like plants consist of different proportions of the same elements, and then adds:

"Four earths generally abound in soils, and these by chemists are called aluminous, siliceous, calcareous and magnesian; and of these the three first are the principal, and, in familiar language, well known to every farmer as clay, sand and lime. Calcareous earth is considered as essential to give to soils the capacity of attaining to the highest degree of fertility. Few soils, indeed, are wholly destitute of calcareous matter, but very few possess so large a proportion of it as would be salutary. Limestone is the great source of calcereous matter. But this is of various qualities. To know, then, the constitution of the lime he uses is important to the farmer."

Pursuing the chemical problem a little farther, the speaker quoted Sir Humphrey Davy's explanation of manner in which lime acts upon the soil, but gives preference to that of John Young, a writer on agriculture, which in brief is that lime in the soil acting either as a carbonate or hyper carbonate, though chiefly as the latter, absorbs carbonic acid, a most important article of vegetable food, which carbonic acid is copiously evolved in the putrefactive process of manures; and also, when there is a scarcity of aliment in the soil, the lime absorbs carbonic acid from the air and disperses it according to the calls of vegetation. Having thus elucidated the theory of lime as a co-worker with

manures under the soil and air above it, the speaker cited experiences of farmers in Scotland, England, Pennsylvania, Delaware, and, by implication, in Essex county, to show that lime of the right kind has the effect which the theory calls for. Then he proceeded to a discussion of barn-yard manure, and described how the farmer by adopting a different from the prevalent practice could double the available quantity of it by the method of composting. Then taking up the topic of breeding he gave this interesting passage:

"In respect to live stock it is gratifying to see the spirit excited within the last five or six years to attend to their melioration by preserving some of the most promising for breeders instead of sending them to the shambles, and by introducing from other countries some individuals, already highly improved. New England was originally granted to merchants of Plymouth, in the country of Devon, in England. It is natural to suppose that some of the early settlers sailed from Plymouth and brought with them the Devon breed of cattle. The uniform red color of various shades, some deep red approaching to brown, now so commonly seen among us, are probably descendants from the Devon race originally imported. Their uniform red color corresponds with a distinguishing mark of the Devon breed, now so highly improved and celebrated in England. Among our own, individuals of this stock might be selected, admitting, with equal care, of equal improvement on the principles now so well understood by English breeders, who are indebted for them to the celebrated Robert Bakewell. On the same principles all our other domestic animals may be improved. And this course appears to me indispensable for the speedy attainment of extensive improvements of our stock, of neat cattle especially. More than one generation must pass away before highly improved races from the few imported animals can be generally obtained. In this important work every substantial farmer in the country ought to engage, and by their rival efforts in every county the great object might be attained. Beauty of form is desirable, and will merit attention; but strength for labor and ample supplies for the dairy are more important. A disposition to fatten at an early age, a point of excellence zealously sought for in England, where husbandry labors are chiefly performed by horses, is not of material consequence to farmers in New England, where oxen for draught and cows for the dairy constitute the most interesting stock."

On the topic of good butter the speaker expressed doubt that it could be produced in summer without the aid of ice houses or

spring houses, and said that Philadelphia had the reputation of better summer butter than any other city in the United States. This he attributed to the spring houses of that region, which he described thus:

"Over these springs small houses are erected, usually of stone. The room of the spring-house may be from ten to twenty feet square, according to the quantity of milk to be provided for. Trenches are made on the four sides of the floor, bottomed and lined with flat stones. The residue of the floor is likewise paved with stones. The water from the spring enters at the side of one trench, runs all round, and at the opposite side passes away at a hole left in the wall. The under side of this hole is at such a height above the bottom of the trenches as to raise the water just enough to keep the milk cool in the pans, which are placed in it. This water runs perpetually from its source, and as constantly passes off at the outlet. In one of the trenches are also set the cream pots and the pots of butter the night before it is carried to market."

It was in touching upon his next topic that the orator became slightly facetious, with reference to the impracticability of premiums in the given case, and in so doing implied a compliment to the farmers whom he addressed. He said:

"Much has been said and written concerning an evil which pervades our whole country, from one extreme of the Union to another, the general use of spirituous liquors, prevailing, in the opinion of wise and good men, to a mischievous excess. Sometimes it has been hoped that agricultural societies might find means to check the pernicious practice. But the class of farmers who abstain from it must be too numerous to become candidates for premiums on temperance. Besides, such prudent men need no remuneration for their abstinence. Here, virtue is indeed its own reward."

The orator then referred to the general use by farm laborers in France and Spain of small wines, instead of ardent spirits, and added that a French gentleman with whom he had conversed on the subject admitted that such wine was not equal to good American bottled cider. Upon the topic of cider thus opened up, the orator discoursed at considerable length, with reference solely to the best method of producing it. He dissented from the prevalent idea that any kind of apples will serve in making good cider, and renounced specifically what used to be called "cider

apples," which he terms "wild ungrafted fruit," and then proceeded:

"In some parts of New Jersey in which ciders of superior excellence are made, the farmers produce them wholly by grafting; nor can we expect fully to rival them until we adopt the same practice. In Massachusetts probably different kinds of trees might be selected for orchards which ripen their fruits at the times most proper for making them into cider. Apples until mellow do not attain their highest flavor, and till then cannot give the highest flavor to cider. It would require but little attention to select and propagate the best apples, thus ripening in succession. Such ciders, made of ripe and unmixed fruits, would also be more easily managed in the most difficult and important part of the process of cider-making, its first fermentation, on the right or wrong conducting of which the character of the cider depends. In one case it will be soft and pleasant; in the other hard and austere."

The next topic of the address was the ploughing in of green crops for fertilization which was treated at considerable length. The following was the peroration:

"It is supposed, and justly, that these public shows by exciting an emulation among farmers will lead to important improvements in our husbandry. The general question which the case presents is, 'What will be the easiest, cheapest and most effectual means to accomplish this great object?' A principal one has been to grant premiums for the greatest crops of specified plants on given quantities of land. One pleasing result has appeared, that, by ample manuring and good culture, the usual crops of the same plants may be doubled and trebled. But is it necessary to continue premiums of this kind? May not now the entire management of farms, rather, claim attention? Instead of numerous small premiums, dispersed on a variety of objects might they not be advantageously concentrated for the purpose here intimated—the cleanest, most economical, the most productive management of farms? For it must be such a general improvement of the entire farm that will constitute the farmer's permanent prosperity.

In ploughing the just aim must be to make a straight furrow and of uniform breadth and depth, and so to turn over the furrow-slice as completely to cover whatever plants or manure are upon it. All this cannot be effected with a hurried step. And what benefit can possibly result from such a step? A farmer's

oxen at the plough must labor a great part of the day to properly turn over an acre. To do this without a driver will require a skillful ploughman and well-trained oxen. To encourage the forming of such ploughmen and oxen, should I conceive, be the sole object of ploughing matches. Working oxen at the plough may be considered as well trained when they obey the voice of the ploughman, keep the track in which they ought to move, and step as quickly as will be compatible with the necessary continuance of their labor. And as the annual exhibitions at this place have demonstrated the practicability of performing the general operations of the plough with one yoke of oxen, without a driver, it may merit consideration whether premiums should not be thus limited in all future trials with the plough. Under such limitations every farmer who is ambitious to exhibit proofs of superiority in these points, would be sensible that his oxen must attain a certain size, and be, though not fat, yet well-fleshed, which would give strength to their sinews and momentum to their exertions. With such oxen all our agricultural labors would be so well performed that there would be no room to envy the condition of farmers in any of our sister states, in some of which their horses consume, perhaps, as much grain as would furnish bread to all the inhabitants of New England."

It may be remarked that the trustees acted upon two of Col. Pickering's suggestions in the following year, when they offered a premium, through certain of the county societies, for the best cultivated farm, and modified the regulations of the Brighton cattle show, so that premiums were given in the ploughing match for single-yoke teams and double-yoke teams, separately. Previously all had ploughed in one competition. It was made optional with owners of single teams, however, whether or not to have a driver other than a ploughman. A premium "for the best farm," to be awarded upon the judgment of a committee of the trustees, was first offered in 1830. The reason for non-action previously, is stated in the report of 1830 to have been, that "the district, over which the society extends, being so large, it would not be practicable for the trustees personally to inspect the farms of the

applicants. In this respect the county, or local societies, have a great advantage over ours." When the practice was entered upon, in 1830, the sworn statements of applicants were taken as the basis for decision. Still later the trustees employed an agent to visit farms thus in competition.

The orator of the year 1820 was Josiah Quincy. He, like Col. Pickering, was familiar with both the practice and theory of farming. An adequate apprehension of theory and practice was the habit of his mind, not better illustrated in conducting a farm than ad-administering the affairs of a city or a university. In preparing his address he had both a practical and a literary end to serve. As to the former he withheld nothing requisite to a proper instruction of his farmer audience; was blunt and plain almost to the point of audacity in the homiletic part of that instruction, and, withal, dealt as aptly as seems possible in regard to the sensibilities of the ladies. He began as follows:

The board of trustees of the Massachusetts Society for Promoting Agriculture, have requested that I should address you this day on topics connected with the objects of their institution, and with the occasion. In acceding to their appointment I have yielded to considerations of official duty. For the manner in which the task shall be executed, I need not apologize to practical and intelligent men, such as I have now the honor to address. They know well how difficult it is to cast over a trite subject the air of novelty, or to make one that is familiar, interesting. There is also something in the every day labors of agriculture apparently too rough for a polished discourse, too common for one that is elevated, and too inseparable from soil and its composts to be treated, to the general

ear, without danger of offence to that fastidiousness of fancy, which is miscalled refinement.

Amid the perils which thus surround every public speaker upon such topics, where on the one hand the rough necessities of the farmer require plainness and particularity, and where on the other the over-scrupulousness of the imagination requires that important subjects of agriculture should be generalized and intimated, rather than uttered, I shall deem myself sufficiently fortunate if it shall be my lot to escape without failing in fidelity to the interest of the country, and yet without violating the dainty ear of city sensibility. Our purpose, then, this day is to seek what is true and what is useful in relation to the interests of our agriculture.

In executing this purpose I shall address myself chiefly to that great body of our countrymen who are emphatically called, farmers; by which I mean the great body of Massachusetts yeomanry, men who stand upon the soil and are identified with it; for there rest their own hopes and there the hopes of their children. Men who have for most part great farms and small pecuniary resources; who are esteemed more for their land than for their money; more for their good sense than for their land, and more for their virtue than for either. Men who are the chief strength, support and column of our political society, and who stand to the other orders of the state in the same relation which the shaft bears to the pillar; in respect of whom all other arts, trades and professions are but ornamental work, the cornice, the frieze and the Corinthian capital.

I am thus distinct in declaring my sentiment concerning the importance and value of this class of men from no purpose of temporary excitement or of personal conciliation, but because I think it just, and their due, and because, being about to hint concerning errors and defects in our agriculture, I am anxious that

such a course of remark should not be attributed to any want of honor or respect for the farming interest. Whatever tends to stimulate and direct the industry of our farmers, whatever spreads prosperity over our fields, whatever carries happiness to the home and content to the bosoms of our yeomanry, tends more than everything else to lay the foundations of our republic deep and strong, and to give the assurance of perpetuity to our liberties.

The errors and deficiencies of our practical agriculture may be referred in a general survey with sufficient accuracy to two sources, the want of scope of view among our farmers and the want of system in their plans. Those to which I shall allude will not be such as require any extent of capital to rectify. All that will be requisite is a little more of that industry of which our farmers have already so much, or that industry a little differently directed. It is not by great and splendid particular improvements that the interests of agriculture are best subserved, but by a general and gradual amelioration. Most is done for agriculture when every farmer is excited to small attentions and incidental improvements; such as proceed, for instance, from a constant application of a few plain and common principles. Such are, that, in farming, nothing should be lost, and nothing should be neglected; that everything should be done in its proper time, everything put in its proper place, everything executed by its proper instrument. These attentions, when viewed in their individual effect, seem small, but they are immense in the aggregate. When they become general, taken in connection with the dispositions which precede and the consequences which inevitably follow such a state of improvement, they include, in fact, everything.

Scope of view in a general sense has relation to the wise adaptation of means to their final ends. When applied to a farmer it implies the adaptation of all the

buildings and parts of a farm to their appropriate purposes, so that whatever is fixed and permanent in its character, may be so arranged as best to facilitate the labor of the farm and best to subserve the comfort, convenience and success of the proprietor. Our ideas upon this subject may be best collected from inspection.

If our fellow farmers please, we will therefore in imagination adjourn for a few moments, and take our stand first at the door of the farmhouse. I say "at the door." Far be it from me to enter within it. Far be it from me to criticise the department of the other sex, or to suggest that anything peculiarly subject to their management can be either ameliorated or amended. Nor is it necessary; for I believe it is a fact almost universally true, that where the good man of the family is extremely precise and regular and orderly in his arrangements, without doors, he never fails to be seconded, and even surpassed, by the order, the regularity and neatness of the good woman within.

Let us cast our eyes then about us, from the door of the farm-house. What do we see? Are the fences on the road in good condition? Is the gate whole, and on its hinges? Are the domestic animals excluded from immediate connection with the dwelling house, or at least, from the front yard? Is there a green plot adjoining, well protected from pigs and poultry, so that the excellent housewife may advantageously spread and bleach the linen and yarn of the family? Is the wood-pile well located, so as not to interfere with the passenger, or is it located with especial eye to the benefit of the neighboring surgeon? Is it covered, so that its work may be done in stormy weather? Is the well convenient, and is it sheltered, so that the females of the family may obtain water without exposure, and at all times, and in all seasons? Do the subsidiary arrangements indicate such contrivance and management as that nothing useful should be lost, and noth-

ing useless offend? To this end are there drains, conveying what is liquid in filth and offal to the barnyard or the pens? Are there receptacles for what is solid, so that bones and broken utensils may occasionally be carried away and buried? If all this be done, it is well; and if, in addition to this, a general air of order and care be observable, little more is to be desired. The first proper object of a farmer's attention, his own and his family's comfort and accommodation is attained. Everything about him indicates that self respect which lies at the foundation of good husbandry, as well as of good morals.

But if any of us on our return home should find our door barricaded by a mingled mass of chip and dirt; if the pathway to it be an inlaid pavement of bones and broken bottles, the relics of departed earthen ware or the fragments of abandoned domestic utensils; if the deposit of the sink, settle and stagnate under the windows, and is neither conducted to the barnyard, nor has anything provided to absorb its riches and to neutralize its effluvia; if the nettle, the thistle, the milk-weed, the elderberry, the barberry bush, the Roman wormwood, the burdock, the dock and the devil's apple, contend for mastery along the fences, or flower up in every corner; if the domestic animals have fair play round the mansion, and the poultry are roosting on the window stools, the geese strutting sentry at the front door, and the pig playing puppy in the entry, the proprietor of such an abode may call himself a farmer, but, practically speaking, he is ignorant of the A. B. C. of his art. For the first letters of a farmer's alphabet are neatness, comfort, order.

As we proceed to the farm we will stop one moment at the barnyard. We shall say nothing concerning the arrangements of the barn. They must include comfort, convenience, protection for his stock, his hay and his fodder, or they are little or nothing. We go thither

for the purpose only of looking at what the learned call the stercorary, but which farmers know by the name of the manure heap. Will our friends from the city pardon us if we detain them a moment at this point? Here we stop, the rather, because here, more than anywhere else, the farmers of Massachusetts are careless and deficient; because on this, more than on anything else, depends the wealth of the farmer, and because this is the best criterion of his present and the surest pledge of his future success. What then is its state? How is it located? Sometimes we see a barnyard on the top of a hill, with two or three rocks in the centre, so that whatever is carried or left there is sure of being chiefly exhaled by the sun or washed away by the rain. Sometimes it is to be seen in the hollow of a valley, into which all the hills and neighboring buildings precipitate their waters. Of consequence all its contents are drowned or water-soaked, or, what is worse—there having been no care about the bottom of the receptacle—its wealth goes off in the under strata, to enrich, possibly, the antipodes. The Chinese, for aught we know, may be the better for it, but it is lost forever to these upper regions.

Now all this is to the last degree wasteful, absurd and impoverishing. Too much cannot be said to expose the loss and injury which the farmer thus sustains. Let the farmer want whatever else he pleases; but let no man call himself a farmer who suffers himself to want a receptacle for his manure, water-tight at the bottom and covered at the top, so that below nothing shall be lost by drainage, and above nothing be carried away by evaporation. Let every farmer wanting such protection for his manure be assured that he loses by the sun and rain ten-fold as much as will pay all his taxes, state, town and national, every year.

The speaker next discussed the topic of interior fences in the arable or cultivated part of the farm and

declared them to be worse than useless. He urged that pasture land should be separated by a sufficient fence from the cultivated land, and that the condition of the separated areas should be a permanent one; that no beasts should be permitted to range upon the soil destined for the plough and the scythe; that nothing is gained by pasturing mowing-land, because any apparent gain is offset by the labor, cost of building and keeping in repair interior fences, by loss of time in ploughing through frequent turning about of the team, and loss of crops at the "head-lands," where barberry bushes, nettles and injurious weeds grow, and field mice, wood-chucks, skunks, and squirrels inhabit; that surplus stones may be disposed of by thickening the outer walls, or by building them into pyramids and covering them with grape vines; and that, while pasture land may profitably be divided by interior walls, arable land, though it were a hundred acres, should be in one lot, for then the plough runs clear in a long furrow.

Upon the topic of building farm houses he said:

"The fault is not peculiar to farmers—it is true of men in almost every rank and condition of life—that when about to build they often exceed their means, and almost always go beyond the real wants of their families, and the actual requisition of their other relations in life. But let not the sound, practical good sense of the country be misled by the false taste and false pride of the city, where wealth, fermenting by reason of the greatness of its heaps, is ever fuming away in palaces, the objects of present transitory pride, and too often of future long-continued repentance.

Now what do we sometimes see in the country? Why, a thriving farmer, touched with this false taste,

will throw up a building thirty or forty feet square, of two or two and a half stories height, four rooms on a floor, with an immeasureable length of outbuilding behind. And what is the consequence of all this greatness? Why, often, for years the house will not be wholly glazed; or if glazed, not clapboarded; or if clapboarded not finished; the destined portico never put up; the destined front step never put down; and the ragged clapboards on each side of the front door, there they stand, year in and year out, staring and gaping at each other with a look of utter despair of ever being united. And if you go into these mansions, what do you see? Why, you will often find that while the good man of the house and his consort are snugly provided with warm, well-plastered rooms, the children and all the rest of the family sleep about in unfinished chambers, subject to every sort of exposure. And the "best room," as it is called in the original plan of the mansion, there it stands, the lumber room of the family for half a century, the select and eternal abode of crickets and cockroaches and all sorts of creeping and skipping things, full of old iron and old leather, the stuffing of decayed saddles, the ragged relics of torn bed quilts, and the orts and ends of twenty generations of corn cobs.

When will man learn that his true dignity, as well as happiness, consists in proportion? In the proportion of means to ends, of purpose to means, of conduct to the condition in life in which a kind Providence has placed him. The pride of the farmer should be in his fields. In their beauty, in their order, in their product, he should place the gratification of his humble and honorable ambition. The farmer's great want is capital. Never should his dwelling be splendid at the expense of his farm. In the farm all that is surplus in his capital should concentrate. Whatever is uselessly expended elsewhere is so much lost to his family and his fortune.

Want of system in agriculture leads to loss of time and increase of expense. System has chief reference to the succession of crops; to sufficiency of hands, and to selection of instruments. As to the succession of crops, called rotation, almost the only plan of our farmers is to get their lands into grass as soon as possible, and then to keep them in grass as long as possible. The consequence of this practice,—for it deserves not the name of a system—is to lead to the disuse, or rather to the least possible use, of that great source of agricultural riches, the plough. Accordingly, it has almost become a maxim that the plough is the most expensive of all instruments. And so it is, and so it must be, as the business of our farms is managed. By keeping lands down to grass as long as possible, that is as long as the hay produce will pay for mowing, the consequence is that our lands, when we are obliged, reluctantly, to put the plough into them, are bound and matted and cross-barred with an impervious, inextricable, infrangible web of root and sod. Hence, results a grand process, called "a breaking up," with four, five or six head of cattle, as the case may be; with three men, one at the ox-head, one at the plough-beam, and the third at the plough handle. Is there any wonder that such a ploughing apparatus is an object of aversion? It is impossible for any man to witness a "breaking up," of this kind, without being forcibly reminded of the reflection made by a dry Dutch commentator on that passage in the book of Kings, where it is said that Elisha was found "ploughing with twelve yoke of oxen." "Well," said the commentator, "it is no wonder that Elisha was glad to quit ploughing for prophesying, if he could not break up with less than twelve yoke of oxen."

In fact the plough is the natural instrument of the farmer's prosperity, and the system of every farmer ought to have reference to facilitating and increasing its use. Let a rotation be adopted embracing two or

three years successive ploughings, for deepening and pulverizing; the crops to be succeeded by grain and grass for two or three years more. The plough on its return every five, six or seven years finds, in such case, the land mellow, soft, unimplicated by root, and tender in sod. The consequence is that a breaking up is then done with one yoke and one man. The expense is comparatively small. There is nothing to deter, and everything to invite, the farmer to increase the use of that most invaluable of all instruments. It ought to be a principle that our farming should be so systematized that all breaking up should be done with one yoke of oxen and one man, who both drives and directs the plough.

Systematic agriculture also requires sufficiency of hands. Although this is a plain dictate of common sense, yet the want of being guided by it is one great cause of ill success in our agriculture. Because we hear every day that "labor runs away with profits in farming," almost every farmer lays it down, as a maxim, to do with as little labor as possible; and it almost always results in practice in doing with less than he ought. Labor wisely directed and skillfully managed, can, in the nature of things, result in nothing else than profit. The great secret of European success in agriculture is stated to be, "much labor on comparatively little land." Now the whole tenor of Massachusetts husbandry from the first settlement of the country has been, little labor on much land. Is it wonderful, then, that success should be little or nothing, when conduct is in direct violation of the principle on which success depends?

The speaker closed with a series of apothegms applicable in practical agriculture.

In 1833 Edward Everett was the orator. It may be deemed certain that he had no practical knowledge of

the art of turning a furrow, and improbable that, at that date, he had ever superintended the laying out of a carrot field, or even the setting of a hedge-row. He therefore did not take the piont of view of Col. Pickering, nor, as a farmer speaking to brother farmers, adopt the admonitory tone of Mr. Quincy. He began thus:

It is generally admitted that since the establishment of cattle shows in this country, the condition of our agriculture has manifestly improved. Before that time, our husbandmen seemed to want those means of improvement and encouragement to action, which are enjoyed by their fellow citizens engaged in several other pursuits. Instead of living together in large towns, they are scattered over the surface of the country. Instead of having two-thirds of every newspaper filled with advertisements or information relative to their occupation, as is the case with merchants, the most they could promise themselves was that the weight of an enormous vegetable should be faithfully recorded, and the memory of some calf with two heads or six legs should be handed to posterity. They held no conventions and assemblies, like the clergy and physicians; were not brought together, like the lawyers, at the periodical terms of court to take counsel with each other, and seemed not to possess, in any way, the means of a rapid comparison and interchange of opinion and feeling. Since the establishment of the cattle shows of the Massachusetts Society for Promoting Agriculture, and those of the several county societies, this state of things has been greatly amended, and to a very considerable degree through the agency of these institutions.

The cultivators of the soil are now brought together. Their agricultural improvements, their superior animals, their implements of husbandry, the products of

their farms, their methods of cultivation, are all subjects of inquiry, comparison and excitement. The premiums proposed have given a spring to the enterprise of the cultivators, not on account of the trifling pecuniary reward which is held out, but through the influence of a generous spirit of emulation. The agricultural magazines and newspapers take up the matter in this stage and give all desirable notoriety to what is done and doing. The knowledge of every improvement is widely diffused. Increased prosperity begins to show itself as the reward of increased skill and knowledge, and thus the condition of the husbandman is rendered more comfortable and more honorable.

The orator then entered upon a historical survey of the conditions of agriculture from the earliest times, premising that with agriculture, civilization begins; that where it does not exist, progress is not possible, as is evinced in the condition of the Arabs and the Tartars, who roam with their flocks and herds over a vast region, destitute of all those refinements which require for their growth a permanent residence, and a community organized into the various professions, arts and trades, and who are found, now, after the lapse of 4000 years, in the same condition in which they existed in the days of Abraham. The Greeks and the Romans, he said, held agriculture in honor, especially the latter. The farmer was with them a respected and independent citizen. Cincinnatus, who was called by Livy "the hope of the Roman empire," was found, when called upon to take the position of supreme ruler, engaged in labor upon his farm of four acres. At a later period great landholders who owned slaves were numerous; but the class which tilled their own small farms did not disappear till the overthrow of the empire by barbarous tribes. Under the sway of

feudalism, which followed, those who cultivated the soil were serfs, attached to the soil and sold with it, as the cattle of the farm.

In the contemporary period, the orator found in Europe and America (not including slaves), four classes of cultivators of the soil. The first in the list were serfs or the farm laborers of Russia, living in conditions but little better than that of the vassals under the feudal system; the second, those cultivating farms "at halves," that is for half the annual product; the third, the tenants of farms by lease, the condition generally of farmers in England; and the fourth, those who own the soil they till, which, he said, was the prevalent condition of the cultivators of the soil in the non-slaveholding states of this country, especially those of New England. He then said:

I cannot but express my conviction that this condition is the most favorable to the prosperity of the state and the happiness of the individual. It will immediately be perceived that it is not inconsistent with the possession of some very ample landed estates by individuals. In a country like ours, where every man's capacity, industry and good fortune are left free to work their way without prejudice, as far as possible, there will be among the agricultural as well as among the commercial population, fortunes of all sizes, from that of the man who owns his thousand acres, his droves of cattle, his flocks of sheep, his range of pastures, his broad fields of mowing, and tillage, down to the poor cottager who can scarce keep his cow over winter. There will always be, in a population like ours, opportunities enough for those who cannot own a farm, to hire one, and for those who cannot hire one, to labor in the employment of their neighbors who need their services. And when we maintain that it is

for the welfare of society that the land should be cultivated by an independent yeomanry, who own the soil they till, we mean only that this should be the general state or condition of things; not that there should be no such thing as a wealthy proprietor, whose lands in whole or in part are cultivated by a tenant, no such thing as a prudent husbandman taking a farm on a lease, or an industrious young man, without any capital but his hands, laboring in the employment of his neighbor. These are parts of the system as it exists among us; and we maintain that it is a better system than the division of the country into a few vast domains, cultivated by a dependent tenantry, to the almost total exclusion of the class of small, independent farmers.

Am I asked, why it is better? This is a question not easy to bring down to a dry argument. It involves political and moral considerations; it trenches upon the province of the feelings; it concerns the whole character of a people. In a pecuniary point of view it is, of course, not maintained, that, because it is desirable that the cultivator of the soil should own a farm, it is therefore expedient in all cases that he should attempt to purchase one. It cannot be assumed, as a general rule, that it is better for a young man to buy a farm than to hire one, supposing him to have no more capital than is necessary to stock his farm and purchase implements of husbandry. But supposing that he is so circumstanced, that, besides stocking his farm, he can do something towards purchasing it at the outset, with a reasonable expectation that in the course of time, with industry and frugality and temperance, he can make it his own, then it is better that he should purchase than hire. The owner makes improvements with zeal and spirit, for he makes them in the assurance that he or his children will reap the benefit of them; and every new improvement furnishes a new stimulus to those efforts which are necessary to pay off

the debt. But no person takes genuine pleasure in improving another man's property. It is the interest of the tenant to get as much out of the soil as he can, and give as little as he can back to it. When he has exhausted one farm he can take another. Thus, the land, as far as it is cultivated in this way, is undergoing a gradual decay; but not more surely than the generous principle in the heart of him who thus occupies it, who is perpetually, though perhaps unconsciously, under the influence of his interest, engaged in deteriorating his neighbor's property. The owner is under precisely the opposite influence. He strives to render back to the land as much as possible, in return for what he takes from it; for he feels that he is making it the depository of all that his youth and manhood can lay up for the decline of life, for his family and his children.

Whatever, in this way, is true of the young farmer who has purchased his farm on credit, is still more applicable to him, who, happily, begins life the proprietor of the soil which he cultivates. It is particularly in reference to him that the subject presents itself in other relations than those of pecuniary calculation, and assumes an aspect, not merely of an economical, but also of a political question. In general, the inquiry how the land is cultivated derives great consequence from its connection with the political condition of the cultivators. A very considerable portion of the political power of every country must be vested in the landholders; for they hold a large part of the property of the country. They do so even in England, where there is such a vast amount of commercial and manufacturing wealth. Although the land is, to a considerable degree, in England monopolized by rich proprietors, yet attempts have been made, and with success, to give political privileges and consequence to the tenantry. Still, however, the greatest

land-holder in most counties is generally able to carry the elections as he pleases.

There is no way in which a calm, orderly and intelligent exercise and control of political power can be assured to the people but by a distribution among them, as equally as possible, of the property of the country; and I know of no manner in which such a distribution can be permanently and peacefully effected but by keeping the land in small farms, suitable to be cultivated by their owners. Under such a system, and under no other, the people will exercise their rights with independence. The assumption of a right to dictate will be frowned upon, if attempted; and even the small portion of the population who may be tenants will possess the spirit and freedom of the proprietors.

But I own that it is not even on political grounds that I think our system of independent rural freeholders is most strongly entitled to preference. Its moral aspects, its connection with the character and the feelings of the yeomanry, give it, after all, its greatest value. The man who stands upon his own soil, who feels that by the law of the land in which he lives, by the law of civilized nations, he is the rightful and exclusive owner of the land which he tills, is, by the constitution of our nature, under a wholesome influence, not easily imbibed from any other source. He feels, other things being equal, more strongly than another, the character of man as the lord of the inanimate world. Of this great and wonderful sphere, which, fashioned by the hand of God, and upheld by his power, is rolling through the heavens, a portion is his—his, from the center to the sky. It is the space on which the generations before him moved in their round of duties; and he feels himself connected, by a visible link, with those who preceded him, as he is also with those who will follow him, and to whom he is to transmit a home. Perhaps his farm has come down from

his fathers. They have gone to their last home; but he can trace their footsteps in the daily scene of his labors. The roof which shelters him was reared by those to whom he owes his being. Some interesting domestic tradition is connected with every enclosure. The favorite fruit tree was planted by his father's hand. He sported in his boyhood by the side of the brook which still winds through his meadow. Through that field lies the path to the village school of his earliest days. He still hears from his window the voice of the Sabbath bell, which called his fathers, and his forefathers, to the house of God; and, near at hand, is the spot where he laid his parents down to rest, and where, he trusts, when his hour is come, he shall be dutifully laid by his children. These are the feelings of the owner of the soil. Words cannot paint them; gold cannot buy them; they flow out of the deepest fountains of the heart; they are the life-spring of a fresh, healthy, generous, national character. The history and experience of the world illustrate their power. Who ever heard of an enlightened race of serfs, slaves or vassals? How can we wonder at the forms of government which prevail in Europe, with such a system of monopoly in the land as there exists? Nothing but this explains our own history, clears up the mystery of the revolution, and makes us fully comprehend the secret of our own strength. Austria or France must fall, when Vienna or Paris is seized by a powerful army. But what was the loss of Boston or New York in the revolutionary war to the people of New England? The moment the enemy set his foot in the country he was like a hunter going to the thicket to rob the tigress of her young. The officers and soldiers of the revolution were farmers and the sons of farmers, who owned the soil for which they fought; and many of them, like the veteran Putnam, literally left their ploughs in the furrow to hasten to the field of battle.

After depicting the felicity, social and political, of the agricultural population of New England, the orator closed with the now familiar lines of the poet:

What constitutes a state?

The publication of the society's Journal as a serial ceased in 1827. The occasion of it was that other publications had appeared in newspaper form, containing the latest information, with competent discussion, upon agricultural matters. The principal of these, at that time, was the New England Farmer, which was started in the year 1822. In 1823 the trustees of the society bestowed upon it, by a formal vote, a cordial recommendation to the patronage of the public. It was issued weekly and reached its farmer subscribers more promptly than could the society, with its semi-annual issue. It was welcomed, therefore, as a valuable auxiliary in the society's work, and intimate relations with it were established, so that it became virtually, the organ of the society. Its founder and editor, Thomas Green Fessenden, was a man well qualified, by education and interest in the cause of agriculture, to conduct it. The degree of that intimacy and the appreciation, by the trustees, of Mr. Fessenden's services and abilities, are indicated by a vote of the board passed soon after his decease in 1837, placing $100 at the disposal of a committee to erect, at his grave, a monument. A marble shaft at Mount Auburn bears his name and perpetuates his memory.

Two volumes of the Journal were published beyond the date of the regular succession, one in 1830 and one in 1832, making ten volumes in all, as put into permanent binding. In the final issue the editor reverted to

the early experiences of the trustees in publication, and the difficulty, then found, in obtaining original contributions. He expressed opinion that the Journal had had an educative influence in arousing the curiosity and exciting the intellectual powers of the agricultural population, and recognized, in the existing circumstances, cause for congratulation. "At the present moment," he said, "three or four agricultural newspapers are fully supplied with original matter, and, what is most encouraging, far the greater mass of articles are from the pens of real cultivators." These ten volumes have an average of about 400 pages. The collection as a whole is a testimonial of the diligence and zeal of a service to the public, in the doing of which no applause was expected and but little was bestowed, and wherein the pecuniary outgo was much and the income small; and it is also a memorial or record of permanent value, as relating to the agricultural progress of the period which it covers. In thus finally referring to it, two matters may be noticed which did not seem to be pertinent at any point in the text as hitherto written, and which have both an historical and an intrinsic, that is to say, readable, interest.

The first throws light upon the relative progress in invention, in the line of agricultural utility, in this country and in England, and is contained in a communication from Col. Timothy Pickering, published in the Journal in 1820. The subject was the comparative value of the labor of oxen and of horses, in farming operations. The writer expressed preference for the former, and, while recognizing the fact that horses were generally preferred in England, quoted a remark contained in a then recent discussion of the subject by Sir John Sinclair, president of the British Board of

Agriculture. The remark was: "The principal objection to the use of oxen is the difficulty of shoeing them." Upon this the writer of the communication says: "The facile mode of shoeing oxen in New England would remove that objection, and I take the liberty of suggesting the propriety of the trustees of our State society of agriculture, communicating to Sir John a drawing and description of our simple frame and apparatus for shoeing oxen, for the information of British agriculturists, to whom we are so much indebted for instruction and examples in the most approved practices in husbandry."

The final volume of 1832 contained an article by John Lowell, who had been a trustee of the society from 1806, and its president from 1823 to 1828, the subject being the cultivation of live hedges. In it the statement is incidentally made that the Virginia thorn, which had been used by Mr. Quincy for setting his long hedge in 1808, had proved unsatisfactory in general, because of the ravages of a worm or borer at its root. Mr. Lowell says: "We are indebted wholly and entirely to the experiments of Ezekiel Hersey Derby, Esq., for the possession of a plant, the buckthorn (*rhamnus atharticus*) which, from ten years trial, seems to afford every desirable quality for a healthy, beautiful and effectual hedge. I can only say, and I feel it a duty to say, that I have tried this plant for six years. It is hardy, rapid in its growth, of impenetrable thickness, and, so far as the extent of the experiment enables me to judge, not subject to any disease or visitation of any insect whatever." It may be added as more closely identifying with the society the introduction of the buckthorn hedge that Mr. Derby, whose estate was in Salem, was a member of

the society from an early date, and one of its trustees from 1816 through a period of years.

The relinquishment, in 1830, by the society of all control and responsibility in the Botanical Garden at Cambridge; the cessation of the Journal in 1832, and of the cattle shows in 1835, had effect in directing the society's expenditures into different channels; not to any important extent into new channels, but producing a more copious flow in those already existing.

An official printed statement relating to the year 1835, says:

"The invested funds and cash of the society amounted at this time to $12,914. There had been no increase of them for many years, the income of the society, as well as a part of the donations to it, having been applied to premiums of various kinds, and very largely to the Botanic Garden. It was thought by many, that it was now time to attempt a new field of usefulness, by a systematic introduction of improved breeds of cattle. To do this, it required large outlays in the purchase and importation, as well as a continuous expense in the proper care of the stock after its arrival; consequently, for several years successively, the amount paid out in premiums was sensibly reduced, and a portion of the society's income was reserved and invested, with the view to more efficient action hereafter."

The society, at an early date already named, had entered upon the practice thus suggested, and by its own importations, and otherwise, had given it encouragement. Its action in this particular, whether direct or indirect, was equally in furtherance of its mission, the promoting of agriculture. Its indirect

influence was exerted chiefly in two ways, the publication of editorial or communicated articles in advocacy of improved breeding, and the award of premiums to individuals, who, at their own cost and trouble, had made desirable importations. During the period of the cattle shows, such animals, as well as others imported by the society or coming to it by gift, made a part of the attraction of the Brighton annual festival.

An importation by the society, in 1816, of three Alderney cattle has been mentioned. The next of record is an importation of a bull and two cows from Flanders, in 1817, by Israel Thorndike of Boston. He was a member of the society from the year 1792, and its vice president from 1823 to 1829. He made a gift to the society, in 1818, of the bull and one of the cows. The animals were of much celebrity, and their progeny, as they appeared from time to time at the cattle shows, won great admiration. A bull of the Tees-water breed, of reputation in England at the time, was imported by a member of the society in 1818. It was also known as the "short-horn" breed. In the same year Charles Thorndike, a son of the above mentioned Mr. Thorndike, imported a bull and two cows from Portugal. In 1819 Gorham Parsons, a trustee, and Cornelius Coolidge, a member of the society, each made importations of cattle of the Holderness breed. In 1820 was made the first of a succession of gifts to the society from two English gentlemen, who were brothers, Sir Isaac Coffin and Gen. John Coffin. The former held rank as an admiral in the British navy. At the time of making these gifts, Gen. Coffin was residing in New Brunswick. Their interest in the society was derived from the fact that they were both of Massachusetts, having been born in Boston. Both were in the royal service at the

outbreak of the war of the Revolution, and in that contest abided by the fortunes of the British flag. Neither the experiences nor the results of the war had effect to eradicate their regard for their ancestral home, a feeling to which, as will appear in the record, they bore testimony in a very practical way.

In 1820 General Coffin presented the society with a stallion of the breed called in England, the "light cart" or "Suffolk Punch" breed. It was a superior animal in appearance as well as in strength, and was named Columbus. The trustees had a portrait of the animal painted, and it was engraved for publication in the Journal. In 1823 Admiral Coffin presented the society with a short-horn bull of English breeding, and in the following year, a bull and heifer of the Hereford breed and also a short horn-heifer, with due certificates of pedigree. The short-horn bull was named "Admiral," and was successively placed in different counties of the State, usually in charge of some officer or member of one of the county agricultural societies. This was conformable to the general practice of the society, both prior and subsequently. In 1825 Admiral Coffin gave the society a stallion and mare of the breed known as the Yorkshire Cleveland Bays, much favored in England as road horses. In 1827 General Coffin bestowed the gift of four rams and three ewes of the Devonshire Nott breed. One pair of these was sent to the Worcester county society, and one pair to the Hampshire county society.

These various donations became the occasion of a very interesting episode in the proceedings at the Brighton cattle show in 1827, in the course of an address made by the president of the society at that time, Hon. John Lowell, preliminary to announcing the premiums. General Coffin was present, as a guest

of the day. President Lowell, having in his remarks led up to an enumeration of the various gifts which had thus been received by the society, said, with special reference to the latest gift of the sheep:

General Coffin, not content with purchasing them, has, at an age above three score years and ten, followed them through their long passage to New Brunswick, and thence, without delay, from Eastport to Boston, in order that they might grace the show of the society on this anniversary. He is now present at our festival. There is no feeling stronger than that of an attachment to the country in which we are born. Time and distance have no effect, unless it be in making the feeling more intense. I know of no case more touching, none in which the strength of that natural feeling has been more strongly exemplified than in that of these two brothers, who, separated from their country in youth, engaged in the service of a nation now foreign to us, look back with a kind, affectionate and devoted attachment to the land of their birth. This family, as is probably well known to you all, were among the earliest settlers of Nantucket, an island which has done more than any other spot to raise the reputation of our nation for hardy enterprise and unblemished morals. Shall I receive a single dissentient vote, when I propose the thanks of this assembled body of full-blooded Yankees to General Coffin and his brother, Admiral Sir Isaac Coffin? *

* The brothers, John and Isaac Coffin, were sons of Nathaniel Coffin, who, towards the middle of the last century, was a merchant in Boston, and for a time, was the king's cashier of customs. His residence was at the westerly corner of Essex street and Rainsford's lane. The lane, much widened, is now known as Harrison avenue. The houselot and garden extended southerly to the shore, the line of which is denoted by the present Beach street, and the waters of South Cove washed against the garden wall of the estate. The mansion house, which stood near Essex street, was the birth place of John and Isaac; and it may be surmised that their fondness, or, certainly, fearlessness of the sea, traceable in part to a Nantucket ancestry, gained something from this proximity of the tide water to the garden wall. It may be suspected

The vote was carried unanimously by a show of hands. At an earlier date the society had signified its appreciation of these generous gifts, in bestowing its gold medal upon each of these benefactors, and by electing them as honorary members.

In 1821 the trustees ordered an importation of two pairs of the breed of Leicester sheep. In the same year an imported bull was presented to the society by John Hubbard of Boston. In 1822 an Arabian ram, of the long-wooled breed, was presented by D. L. Pickman of Salem. In 1823 three sheep from the province of Astrachan, in Russia, a breed remarkable for their excellence as mutton, were received by gift from Francis Peabody of Salem. An importation of a bull and three cows of the Ayrshire breed was made by the trustees in 1835, at a cost of $1,170. Two instances of bringing swine from foreign lands appear in the record of these early years, one in 1818, and one in 1823. It may be noted as evidence of the importance in which these undertakings were held by the trustees, that, in several instances during the period thus referred to, medals were voted by the trustees to

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that cautious youthful voyages were made in some frail canoe along the shore now marked, in a general way, by Harrison avenue, with occasional bolder ventures across the cove to the shore of Dorchester Heights, now First street, South Boston.

John Coffin was born in 1751, and died in New Brunswick, in 1838. In early manhood he entered the British army and was with the body of troops that fought at Bunker Hill. As a captain and major he made a military reputation in campaigns in the southern colonies during the war. He continued in the service and became a colonel in 1797; major general, in 1803; lieutenant general, in 1809; and general, in 1819. After retiring from the army he was a member of the legislative assembly of New Brunswick.

Isaac Coffin was born in 1759, and died in Cheltenham, Eng., in 1839. He entered the British navy as a midshipman, in 1773, and had a long and varied experience in the service, including several naval encounters in the war of the Revolution. He became a lieutenant in 1778; commander, in 1789; rear admiral, in 1804; vice admiral, in 1808; admiral, in 1814. In 1804 he was made a baronet and was a member of parliament in 1818 and 1826.

shipmasters who had bestowed special care upon the animals during the voyage.

An important share of the society's bounty continued to be offered, each year, after the suspension of its cattle shows, in premiums for the best cultivated farm, for the largest crop per acre of certain vegetables, for the cultivation of forest and other trees, for useful inventions, etc. It also contributed each year to the total of premiums offered by certain of the county agricultural societies, presumably those whose pecuniary resources were least, or those where certain lines of agriculture, deemed specially desirable, were pursued, either because of the enterprise of the farming population or favorable situation. Such premiums were usually, if not invariably, in whatever county offered, open to competitors from all other counties. The total of premiums paid in the year 1838 was $900, and in each year up to 1842, several hundred dollars. The state of things as respects the use of the plough, at this period, is indicated in the fact that, in 1837, a premium of $30 was offered to any mechanic "to construct and introduce, for the use of farmers, a sub-soil plough." In 1840, as previously intimated, it had become well understood that the ideal of a plough for ordinary use had not been fully attained in the manufacture of that instrument on the Jeffersonian lines, with the early New York improvements. Accordingly, the society offered these premiums: "For the best plough that will turn the sod over and lay it flat, regard being had for excellence of work, ease of draught, cheapness, etc., $100; for the best plough that shall lay the sod on edge or obliquely, regard being had to like qualities, $75." A trial, or competition in the field, was had at Worcester on Oct. 13,

1840, and the award of the larger premium was to Prouty & Mears, and the smaller to Charles Howard.

In 1836 the trustees appeared before a committee of the Legislature and testified, personally, in approbation of pending legislation for the appointment of an agent to make an agricultural survey of the State. The project was carried through, and the State agent appointed was Rev. Henry Colman, of reputation as an expert in agriculture. In 1839 Mr. Colman was made the delegate of the society to attend a convention of silk producers, held in Washington, D.C., his expenses being paid by the society. In 1842, the State survey being completed, Mr. Colman visited Europe to make a like general survey, with intention to publish a volume on his return, embodying his observations and conclusions. The society subscribed for 100 copies in advance, paying, at once, in the proportion agreed upon by individuals who had entered into a like subscription. In 1839 the total of premiums paid was $1,190, of which $400 was given to county societies, and $450 for the best cultivated farms. Of the remainder a part was a premium of $100, awarded to the Northampton Beet Sugar Co., for the production of the greatest quantity and best quality of sugar from the sugar beet.

In 1842 the society reached its semi-centennial date. The record of the period upon which it could look back has here been indicated with sufficient fullness to make superfluous any commentary or encomium, other than what may be contained in the remark that the labor which had been performed by its officers had been arduous, and the harvest sought had been abundant. Agriculture had been greatly promoted, in Massachusetts, by its activities. Many names, eminent in the State and the nation, had, from

time to time, been added to its roll of membership. Dr. Aaron Dexter, who was the president at the close of the quarter century, in 1817, was succeeded in office in 1823 by John Lowell, son of John Lowell, the charter member and president from 1796 to 1802. In 1828 Thomas L. Winthrop became the president. He yet held the office at the date of his decease, in 1840. This long-continued service, and his devotedness in it, were recognized in suitable obituary resolutions, which are contained in both the written and printed records of the society. His successor, chosen in 1841, was John Welles, a resident in Boston, for many years, having a large farm in the adjoining town of Dorchester, and who subsequently carried on still more extensive agricultural enterprises in that part of Natick, which now commemorates his name, the town of Wellesley.

The society's second half-century begins very modestly in the business record with a gift, in 1842, of $100 to the agricultural society organized for the three counties of Hampshire, Hampden and Franklin, and a like sum to the Plymouth county society. A premium was offered for the best model of a farmer's daybook, by which was meant a blankbook, ruled and arranged with printed headlines, for keeping a record suitable for comparison respecting the planting, growth and harvesting of crops and matters pertaining to stock, the dairy, labor, etc. The intent, apparently, was to enable the farmer to judge with accuracy as to whether he was gaining or losing, improving or retrograding, in each particular department, by comparing, under each head, one year with another, or comparing with his neighbor who kept a book classified in like manner. One competitor appeared, but

his model was thought to be too complicated, as it required the keeping of four books, and no award was made at this time. In 1843 premiums of $2,300 of a general character were offered, certain tracts were printed, and $100 paid for premiums awarded by the society of the three counties.

At the trustees' meeting of Dec. 14, 1844, the subject of veterinary education was considered. Doubtless it had been brought forward by John Collins Warren, M. D., who had within a few years become a member of the board. At any rate, he was made one of a committee to inquire into the matter, and, although the report subsequently made bears no signature, the familiar knowledge manifested in it as to the status of European schools of anatomy and surgery, is good evidence that it was prepared by him. As it seems to mark the beginning of that branch of practical science, not only in this state, but in this country, and is of instructive interest, it may properly be given in full. The report was submitted, Jan. 11, 1845, and is as follows:

The committee appointed to consider the best mode of encouraging veterinary education in this state beg leave to report, that, on inquiry, they find that the diseases and accidents to which domestic animals are liable are but little understood among us, and the treatment is consequently empirical and often pernicious. The importance of many animals to the pursuits of agriculture render them worthy of the most careful attention, in an active and industrial community.

We find that, in Europe, schools for the formation of physicians and surgeons for treatment of the diseases of animals have been everywhere established. In Great Britain, France and other countries, the

veterinary physician and surgeon stands as high in public estimation as the regular practitioners of the healing art. In some of the German schools it is made a part of the duty of every student in medicine to attend a series of lectures upon this subject.

No such establishments exist in this country, and the want of information on the subject is truly deplorable. Fine animals are continually sacrificed to the ignorance and prejudice of their possessors. The trustees of this society have originated and diffused many important and difficult improvements in the agriculture of this part of the country, and it seems well worthy of their public spirit and influence to make an effort to introduce a better practice in the treatment of the injuries of animals.

The most useful mode of accomplishing this object would be by the foundation of a veterinary school, but as the funds of the society would not enable them to execute so large a plan, it might, perhaps, be more judicious to give encouragement to some individual to go abroad, for the purpose of instructing himself sufficiently to give lectures, and to explain the best known modes of treatment. The committee recommend that $600 be appropriated in this way, a part of which sum might be paid in advance, and a part after the proposed lectures had been given in a manner satisfactory to the trustees.

What was thus recommended was carried into effect with this variation only, that an arrangement was made with Dr. Edward Brooks, of Boston, who was already a resident and student of medicine and surgery in Paris, that he should devote sufficient time to veterinary studies to qualify himself to give, after his return, a course of lectures as proposed. In the following year, Dr. Warren was authorized to procure in Paris, for the society, an anatomical model of a

horse. The report upon this bears Dr. Warren's signature, and the essential part of it is as follows:

Your committee find that there has lately been completed in Paris the figure of a horse of full size, so constructed that all its pieces may be taken apart. These pieces represent the muscles, blood vessels, heart, lungs and other organs in their natural size and appearance. They are composed of materials of an imperishable nature, and when put together form a beautiful object. The committee, believing that there is no similar work in this country, and that this will be of great use in displaying to practical men the anatomy of different organs which may be the seat of disease, have thought that its acquisition would be a benefit to the agricultural interests of the country, and have, therefore, procured this work and ordered it to be shipped. The committee, seeing the great importance of the bones of the ox and the horse, have also directed the preparation of full sized skeletons of these animals. The committee propose, when these objects have all arrived, that they shall be placed together in some convenient situation, and be made accessible to the agriculturist, without expense.

During the following winter Dr. Warren delivered a lecture upon the anatomy of the horse, at the State House, before the Legislative Agricultural Society, which was composed of members of the Legislature then in session. The lecture was a public one, and the doctor illustrated his remarks by means of the dissected image of a horse, which had then arrived from Paris. This anatomical figure, and the two skeletons, were made available, as the property of the society, in giving instruction during many years, having been kept for a period at the State House, in the rooms of

the Board of Agriculture, and afterwards at the State Agricultural College at Amherst. They were finally disposed of by the trustees, on Jan. 10, 1890, as a gift to Harvard University, for use in its school of veterinary science.

In 1844 the society's land in Brighton was graded for street purposes, and sold in house lots by auction, yielding about $6,000 to the treasury. At the cattle show of the Worcester society, the Massachusetts society paid out this year $1,032.40 in premiums. In 1845 a full set of the society's publications was sent to the Royal Agricultural Society of England, this action having been prompted by Edward Everett, then in that country; and the official correspondence, in the matter, passed through his hands. This year the trustees ceased to offer premiums for nearly all the purposes hitherto recognized, the feeling being, as officially stated, that the measures thus taken had, for the time, produced the desired effect, "in stimulating farmers to a habit of investigation and accurate noting of time, manner and circumstance in which experiments had been made, giving thereby exact knowledge whether particular experiments had been successful or not"; and it was decided to apply the income especially to the introduction of improved breeds of dairy stock.

An importation was authorized of a bull and four heifers of Ayrshire stock, and a like number of Devon stock, with intention of maintaining the herds separately, under the control of the society, that animals of pure blood might, with certainty, be procurable in this State. This was the most important undertaking of the kind, that, up to the date, had been made by the society, and there appears to have been much painstaking by all concerned, in carrying it through. The

sum of $2,000 was voted for the purpose. The trustees employed as the agent of the society, Alexander Bickett of Andover, a Scotchman by birth, and an expert in cattle and cattle breeding. He visited the regions in Great Britain where Ayrshire and North Devon stock abound, and made judicious selections, as is evinced by a letter addressed to him by Henry Codman, one of the committee of importation and treasurer of the society, in acknowledgment of the fidelity of his service. The two herds, upon arrival, were sent to the farm, in Lexington, owned by Elias Phinney, the recording secretary of the society. There they were maintained during four years (or until the decease of Mr. Phinney) as the property of the society, and were managed according to the strictness of breeders' rules, the surplus being sold each year to persons living within the state. In 1849 or 1850 those which had not been disposed of were divided in a manner designed to preserve the purity of each breed. The principal part of the Ayrshires were bought by Mr. George W. Lyman, then a trustee and later the president of the society, and in his possession they became a stock of great celebrity. Others of the collection were distributed by gift among the county societies of the State; that is, one pair of Ayrshires, or one pair of Devons, to a society, thus enabling each "so to dispose of the animals as to keep the breed unmixed, and give character to the stock of the respective counties."

The file of vouchers, and the letters written by the society's agent while abroad, permit the progress of the enterprise, from its inception to the arrival at the port of Boston, to be traced in detail. The Ayrshire bull purchased was known in the Scotch herd book as "Prince Albert." It had been breed by Andrew

McGregor of Doonholm, but at the date of purchase was owned by another cattle breeder. The four Ayrshire cows were bought of Mr. McGregor, who appended to his bill of sale, at the request of the agent, his opinion of the bull which had already been purchased by the agent. It was that Prince Albert was "one of the best breeding bulls in Ayrshire." A like success seems to have attended the agent in obtaining the Devon bull. This he bought of John Blomfield, a cattle breeder living in the vicinity of the estate of the Earl of Leicester, it having been originally of the earl's own far-famed stock. The four cows were bought directly from the earl's own herd. The agent, in his letter, after giving points of pedigree, remarks, incidentally: "Lord Leicester has directed the artist who is to carve out the likeness of a Devon bull, for his father's monument, to look at Mr. Blomfield's bull (the sire of the one I bought), before he begins his work." Such a testimony, considering the certainty, under breeding regulations, of identity in traits and features in the purchased animal and its sire, would seem to be conclusive, and must have silenced even the hypercritical, as respects the merits of the society's Devon bull.

It may be remarked that this reference to the monument of the deceased earl is not the only evidence this file of papers contains, that, in the estimation of Britain's nobility, practical agriculture diminishes, in no wise, the lustre of the family escutcheon. One of the agent's vouchers reads thus: "Mr. Bickett, Dr. to the Earl of Leicester: 2 North Devon heifers, 28£; 2 North Devon cows, 32£." The signature following, in receipt of payment, is not that of the earl, but of the manager of his farm; but manifestly there was no disposition to disguise the prosaic mercantile facts,

nor apprehension of loss of dignity to the house of Leicester, through its known complicity in the cattle traffic.

The events occurring between 1845 and 1850 are few in the record. In 1846 John Chipman Gray became the president, in place of John Welles, resigned, and Daniel Webster was chosen as the first vice president. In 1850 Dr. John C. Warren was chosen second vice president, and the situation remained unchanged until the decease of the former, in 1852. This may be regarded a notable episode in the society's history, in that, for the time being, it had for its two vice presidents, men who, confessedly stood preeminent in the professions to which they respectively belonged. In 1847 a communication was received from the Royal Agricultural Society of France, asking for any information in the possession of the Massachusetts Society as to the phenomena of, and the remedy for, the prevalent potato disease. An expert investigation of the disease had recently been made under the direction of the trustees, and the result of it was sent to Paris. In 1849 Dr. Edward Brooks returned from Paris and delivered the expected course of public lectures, in February, at the State House. In 1850 a pair of North Devon cattle was bought and presented to the State's reformatory institution, at Westboro. In 1851 occurred the decease of Dr. Brooks, and the trustees made an arrangement with Dr. D. D. Slade to give a course of public lectures on veterinary science, which he did in a manner to meet the official approval of Dr. Warren, who was of the committee of arrangements. In this case, as in that of the preceding course, $600 was paid to the lecturer from the treasury of the society.

In 1851 an appropriation of $2,500 having been

made, the treasurer of the society, Thomas Motley, visited Europe and procured a bull and four cows of the Jersey, or Alderney, breed of cattle. These, on arrival, were placed in charge of Mr. Thomas Motley, one of the trustees of the society, at his farm in West Roxbury. In 1852 the society made one more effort to get from the State of Maine the half-township of land, which, through technicalities, had failed to come into its possession upon the separation of the district of Maine from the State of Massachusetts, the Legislature of which had made the grant. In October of this year the decease of Daniel Webster took place, and at the meeting of trustees next ensuing, the following resolution was adopted:

Whereas, it has pleased Divine Providence to remove by death our late distinguished vice president, the Hon. Daniel Webster.

Resolved, That while the trustees of this society, in common with their fellow citizens, entertain a due sense of the many eminent services rendered to the public by Mr. Webster in his political and professional capacity, they feel bound more particularly to speak of the warm attachment which he manifested, throughout his life, by word and by example, to the pursuit of agriculture; to bear witness to his comprehensive views of its general principles, and his thorough acquaintance with its practical details, and to express their sense of his loss as one of the ablest, most constant and most distinguished friends of that great interest in our own or in any country.

The year 1853 is the date of the beginning of operations by the State Board of Agriculture, which was created by an act passed in the preceding year. Thenceforth, the formal annual report, which, since

1845, had been required by law to be sent to the secretary of the Commonwealth, was sent to the Board of Agriculture. Intimate relations were established between the society and the board, arising in part from the circumstance that one member of the board is regularly, in conformity to the act of 1852, chosen by the society, to serve for a term of three years.

The offer, in 1855, of certain premiums may be said to mark, with approximate accuracy, the beginning of a new era in one department of practical agriculture, that of hay-harvesting. The offer was intended to encourage the general use of the mowing machine, and the official report on the matter shows that it had the desired effect. One premium, of $600, was open to competition that year, and the other, of $1,000, was seasonably announced, that the competition might be had and the award made in the following year. The premium for 1855 was "to the possessor of the mowing machine which shall cut, during the present season, with the greatest economy and to the best advantage not less than fifty acres of grass, within the State." The appeal was specifically to the operators of machines, the intent of the trustees being "to bring out skill in the use of a machine comparatively new, without reference to the particular merits of the several kinds then offered to the public." To these words the trustees add that "they felt strong hopes, also, that so large a premium would incite many to try the experiment of mowing with a machine, who would otherwise wait to see whether it was successful or not; in this they were not disappointed, the number of competitors having been large."

The phrases thus used, "a machine comparatively new," and, "the number of competitors having been

large," permit the date of the new order of things in haymaking, in this State, to be fixed with tolerable precision; for, when the record is referred to, it appears that the number competing was forty. If this, after the special incentive, suggested in the words just quoted, had had time to take effect, could be deemed a large number, the possessors of mowing machines in the State prior to 1855, by fair inference, were but few. The condition of things is, in a certain way, indicated in the statistics given in the report of the committee of award. A condition named was that each competitor should mow a measured half-acre in the presence of the society's representative, upon a day appointed by him. It was deemed to be the fairest method that one member of the committee should see the working of all the machines, rather than that the supervision should be shared; and that the whole committee should make the award upon his testimony, aided by information derived from returns, the blanks for which were provided, and were to be filled by the several competitors. The return of these filled blanks was made imperative, else the party was not to be considered in making up the award. In consequence, only sixteen competitors had to be taken into account in making the award. The others, with one exception, made no returns, not being well satisfied, probably, with their own performance. The exception was George W. Lyman, the recording secretary of the society, who did not desire the award, if entitled to it, but wished the committee to have the benefit of any knowledge derivable from the working of his machine. Among the statistics of the operation of the seventeen machines are these: Fingers broken or lost (which, in this case means fingers of the machines, not the operators'), 93; knives broken or lost, 18; pins, screws and

bolts broken or lost, 17; and one instance, of each sort, of breaking a track-clearer, a pole, an axle, an iron brace, a crank and a cog-wheel. What amount of wreckage would have been disclosed, had the records of the entire forty machines been sent in, can only be conjectured; but what is given signifies that the mowing machine, as a practical farming implement, had just begun its career, and that skill was lacking in the makers, and, no doubt, the operators also.

The invention appears to have been sufficiently perfected to work on the level, alluvial fields of the West a few years earlier than upon the irregular land surfaces of New England. A practical working machine had long been sought for. Attempts to produce such are recorded in the pages of history, at various dates, from the time of the Roman Empire, forward. In a reference to the subject in one of the publications of the society it is remarked, that the colonial legislature of Massachusetts granted a patent for a mowing machine. In trusting to his memory the writer made an error, but it was a very natural one; for the patent was granted for a "mowing engine." Although the event ante-dates the existence of the society, a mention of it will not be wholly out of place here, since it relates directly to agriculture, and shows that inventive talent, as applicable in that useful art, received encouragement, in Massachusetts, almost from the beginning. The case is nearly parallel to that given among the anecdotes of Dr. Franklin. In an exigency when Philadelphia was threatened with invasion, more ordnance was needed. Knowing that the Quakers of that city would not contribute, directly, for the procuring of war material, he suggested to them that a fund, already accumulated by them, for the purchase of a fire engine, might be applied in buy-

ing a cannon, "since a cannon is a fire engine." The doctor did no violence to the English language, nor did the Massachusetts General Court of the year 1655. The following was their enactment:

May 23, 1655. Itt is ordered that Joseph Jencks, sen^r., and his assignes, only, shall haue libertje graunted to them to make that engine the sajd Jencks hath proposed to this Court for the more speedy cutting of grasse, for seven yeares, and that no inhabitant or other person within this jurisdiction during that tjme shall make or vse any of that kind of engine without license first obtajned from the sajd Joseph Jencks, on the pœnalty of five pounds for euery such engine so made or vsed, to be recouered at any Court in this jvrisdiction by the sajd Joseph Jencks, sen^r., or his assignes.

All uncertainty as to the meaning of the status is cleared up by the author of the History of Lynn, who states that Jenks was an inhabitant of that place, and made an improvement in the scythe. The historian adds: "This improvement consisted in lengthening the blade, making it thinner, and welding a square bar on the back, to strengthen it, as in the modern scythe. Before this, an old English blade was short and thick, like a bush scythe."

The trustees regarded the result of the competition of 1855, on the whole, with satisfaction. It showed what improvements were necessary, and that no inherent difficulties existed. They say in the official report that "rough land covered with stones, hilly and broken surfaces and reclaimed bogs were all brought under the dominion of the machine;" also, that "the farmer will gain in the end by putting his field into better condition for the use of the machine, with a

consequence to be hoped for, of clearer and better ordered fields, and the removal of stumps and stones that have been too long an eye-sore and a disgrace to many of our farms;" and furthermore, that, "the better and stouter the grass, the more perfect has been the working of the machine, in all respects—an inducement to better cultivation." It had been stipulated that the committee might, at their option, divide the total premium among claimants of equal merit, and the $600 was shared equally in the award between Marcus Barrett of Auburn and S. Parsons & Son of Northampton.

In the offer of $1000 premium for the next year, the appeal was distinctly to the manufacturers, it being for "the best mowing machine that shall be made and used in the summer of 1856"—that is, the trial was to be with newly made machines, and to continue during the haying season, thus securing the latest improvements and an adequate test. A committee of three practical farmers, not members of the society, was appointed to supervise the competition, and make the award. They added one more condition, that each competitor should mow five acres in the presence of the committee on a day fixed by them, and in a field chosen by the exhibitor. Ten machines were entered, and after trial, five were set aside, as being so far inferior that they could not be taken into consideration, and one, as not being adapted to the varied surface of this State. The remaining four were assigned to work in succession on small lots of grass, of equal dimensions, in the same field, each machine being drawn by the same pair of horses and managed by the same driver, who was not interested in any machine. A like trial was had on meadow-bottom, which had never been ploughed, where various natural

grasses, coarse and fine, were intermixed. The award of $1000 was to D. C. Henderson of Sandusky, Ohio. The report of the committee abounds in details, but no statistics of breakage are given, whence, perhaps, it may be inferred that the havoc witnessed in the preceding year had duly admonished the manufacturing experts, leading them to adopt, mentally, a standard for design and workmanship approaching to that presented by Dr. Holmes in his poem entitled the "One Hoss Shay." This retrospect will supply the historically minded reader with two dates—that when, what to modern generations has been known as the scythe, first came into use, being the product of a Massachusetts inventor; and that when this hitherto universal implement began to be supplanted, and the new era in grass-cutting began.

The report contained the following commentary: "The trustees have now done all that lies in their power to introduce the mowing machine into use, as a great labor-saving implement. They hope not only that it will be adopted, but that it will lead the way to the use of others, equally labor-saving and quite as essential to the prosperity of agriculture in Massachusetts."

In 1857 George Williams Lyman was chosen president of the society in place of John C. Gray, resigned. The trustees appropriated $200 for the importation from England of two hay-making machines, known as "tedders." On arrival, the next year, one was placed with President Lyman, at his farm in Waltham, and one with George B. Loring, a trustee, at his farm in Salem. Of their working each made a report, which was warmly commendatory. Both the reports were published in one of the pamphlet issues of the society,

and in more permanent form in the volume of transactions, and no doubt contributed to the general adoption of the apparatus, which followed. The apparatus did not go into general use, however, in its original form; for the new machines made here were much lighter in weight and less cumbrous in operation.

The herd of Jersey cattle imported in 1851 was kept as the property of the society at the farm of Thomas Motley, Jr., in West Roxbury, until 1856. The bull calves were all raised and sold according to the arrangement made with him, as his property. The purchasers were breeders of reputation in different parts of the State. In 1856 the cows and heifers were exhibited by the society at the annual Worcester county cattle show, and were there sold by auction. The central situation in the State of the show-ground, and the convenience of access by railroad, induced a large attendance of farmers, so that the purchasers of the cattle represented an extensive region, and thereby a distribution was made in a manner satisfactory to the trustees.

In 1858, agreeably to a plan decided upon in the preceding year, the trustees made an arrangement with Sanford Howard, an expert of reputation in cattle of pure blood, to visit Scotland and purchase four bulls and ten heifers of Ayrshire stock, of the Swinley strain. The sum of $3,500 was voted for the purpose, with instructions to Mr. Howard, if it proved insufficient, to diminish the number but not the quality of the cattle. In the course of the season they were shipped in two vessels, and on arrival were placed at the farm of Nathan W. Brown, in Topsfield. The management of the herd was similar to that followed in previous like instances. In 1859 the stock then remaining was removed to Mr. Motley's farm in West

Roxbury, and during the following year the animals were sold by auction to prominent farmers and breeders in Roxbury, Salem, Marblehead, Southbridge and Topsfield. In 1858 a bequest of $9,166.07 from Dr. George C. Shattuck, Sen., was received and added to the permanent funds of the society.

In 1859 the trustees received a communication from the Hampden County Society, setting forth a project for organizing a State Agricultural Society, and expressing intention to apply for an independent charter, unless the Massachusetts society preferred to cooperate in the movement through such amendments of its charter as would have a like effect. The trustees voted to put the document on file, and to have the following entered upon the records, as a memorandum explanatory of the views of the society:

By reference to page 408, of volume 6, of the society's publications of the year 1821, it will be seen that the society had not, up to that period, and it certainly has not since, arrogated to itself the position of a State agricultural society. In speaking of the formation of a State agricultural society in New Hampshire, the trustees of that date say, "With us we have no such establishment. The Massachusetts society has nothing which gives it either authority or pre-eminence over any county society. Nor do we wish that any such power should be delegated. We cannot conceive any advantage which could be derived from any general society. If local, with general powers, it would be the object of jealousy. If composed of gentlemen from all parts of the State, its meetings would be few, formal, expensive and productive of no substantial good. All that agricultural societies ought to wish is a charter to enable them to manage their funds, and occasional aid from the Legis-

lature, to enable them to give that spring to agricul tural experiments which is the soul of all exertion."

During the same year the trustees voted to have the following entered upon the records:

Voted, as the opinion of the board of trustees, that the introduction of trials of speed between horses, and awarding premiums therefor, is a perversion of the objects originally contemplated in the establishment of agricultural shows; that the effect has been to withdraw attention from the exhibition of stock and other farm products, and to discourage their being brought to the shows for competition.

Voted, that this board will entertain no application for aid or countenance, in any form, to any agricultural show where trials of speed between horses are allowed, or where the greatest speed is made the test of superiority in awarding any premium on horses.

The society has ever since continued the policy as stated in the foregoing vote.

In March, 1860, the trustees appointed a committee, consisting of George B. Loring, Richard S. Fay and Peter C. Brooks, Jr., to appear before any committee appointed by the Legislature to consider the prevalent contagious, fatal disease among neat cattle, known as pleuro pneumonia, and to advocate efficient preventive legislation. The board also voted to appropriate $2,000 as a guaranty fund to aid in extirpating the disease. On Sept. 12, 1861, the trustees adopted the following:

Voted, that the secretary of the State Board of Agriculture be informed, with a request that he will inform also the Executive, that, in consideration of the

present condition of this country, this society will not this year call for the annual bounty of $600 furnished by the State.

The war had begun, and the trustees felt that the State's money was more needed for her soldiers at the front, than it was needed for the society's work in Massachusetts. On Oct. 18 of the same year, the following was adopted by the board.

Voted, to invest $1500, now in the hands of the treasurer, in the seven-thirty loan of the United States.

The latter vote might not seem to signify much to readers whose memory does not reach back to the trying experiences of the civil war; or, in ignorance of the facts, it might seem only to mean that a prudent investment was made at a good rate of interest. But the prophets of evil were many in those days, though fewer, indeed, in this, than some other northern states. Such decried the ability of the government to fulfill its promises of money payment; predicted that the war would end in ruin of the national credit, and, with special reference to currency notes, or "greenbacks," declared that the time would soon come, when a farmer would not be willing to exchange his load of wood for greenbacks, cord for cord." It argued the possession of patriotic feeling as well as cool judgment, at the point of time named, to invest in government securities. The trustees were men of that stamp, and no doubt felt, besides, that it would be action in the direction of the society's mission to contribute, in this way, to sustain the government, under whose triumphant sword, only, could the arts of peace be expected to flourish. Investments in national securi-

ties to the amount of $7,000, or more, were made subsequently, to which the precise comment might be less applicable; for as the war progressed, the panicky feeling subsided. During the continuance of the war the annual state bounty was declined.

In 1861, the Bussey Farm, so called, at West Roxbury, having become, by bequest, the property of Harvard College, some negotiations were had, initiated, apparently, by the college authorities, looking to a cooperation in scientific education in agricultural matters. This was later attained to in a modified form, whereby the society granted pecuniary aid to this department of college instruction. In 1864 a series of experiments by the society was completed, in which a careful study was made of several different methods of applying manure, record of the crop obtained by each method being kept. In each experiment, five lots of land, of equal size, were used, and the work was carried through three successive years, with different crops each year. One lot, in each case, had no manure; and thus its yield served as a minimum, from which the comparative yield, by different methods of manuring, could be measured. The first experiment was begun in 1860, and the third in 1862. About a dozen competitors, in different parts of the State, participated in each instance. The results were tabulated, and published in pamphlets, by the society, and also in the reports of the Board of Agriculture. The society made awards to the amount of $300, for the best three experiments in each set, or $900 in all.

In 1863 a report was made by a committee appointed that year to consider the best method of applying the accumulated funds of the society. The recommendation was to import and maintain a breeding stock of horses, adapted to farm work and dray-

age; and the Percheron breed, which exists, as stated, in its most perfect form and highest condition in Le Perche, a district of Normandy, in France, was approved. The report affirmed that this breed would not only be a gain to the agriculturalist, in securing a better class of work-horses for farm use, but a class readily marketable as dray horses and the like, and therefore profitable to a farmer who inclined to breed stock. Incidentally it was remarked that the breeding of horses for high speed does not pay the farmer, "though once in a lifetime he may get a fancy price for an animal of this character, if he keeps it long enough, and follows it upon trotting courses for days and years, when he should be upon his farm."

The recommendation was carried into effect at once, and the equivalent of $25,000 francs was voted for the purpose. As the value of United States paper money then stood, it required to purchase the exchange, $7,352.94. Correspondence was entered into with Mr. G. T. Richards, resident in Paris. Early in the winter the secretary of the society, Richard S. Fay, was in Paris, and all the arrangements were perfected, so that the purchase and exportation from France should be made, under Mr. Richards' direction, in the spring of 1864. The horses, two stallions and three mares, arrived at Mr. Motley's farm on July 5, of that year. Afterwards they were placed at the Bussey Farm, some arrangement as to rental, and building a new stable for them, having been made with the college authorities, who were conducting the farm for purposes of agricultural instruction. An excellent bargain had been made by Mr. Richards, both as to quality and cost, and the animals commanded general admiration. The members of the Board of Agriculture made an official visit to the

premises, and leading farmers came from distant parts of the State to behold the society's new acquisition. The trustees expressed their satisfaction, and their appreciation of Mr. Richards' efforts, by tendering him a vote of thanks, and electing him an honorary member of the society. The stallions were named "Conqueror" and "Orleans." The following was the weight of the animals: Conqueror, 1470 lbs.; Orleans, 1270 lbs.; Empress, 1410 lbs.; Normandy, 1330 lbs.; Lyons, 1360 lbs. Photographs of Conqueror and Orleans were engraved for the Board of Agriculture, and published in the annual report of that body. Premiums of $200, $150 and $100 were offered, annually, for the three best yearling colts, the progeny of the stallions. In 1866 the stallions were exhibited at the county agricultural show in Concord, and in 1867 at that in Springfield.

During the third quarter of a century of the society's existence, its surplus or accrued funds were not applied, in premiums, by any constant system. In some years no premiums were paid; and only one, that to encourage the growth of forest trees for ship timber, was continuously offered. In other years the total of premiums paid was very small; but money was expended with a liberal hand in various ways, some of which have been mentioned. Among the additional payments were the following: In 1853, for premiums at the national exhibition of horses, $250, and to aid the Legislative Agricultural Society in giving lectures, $100; in 1854, as premiums for the cattle shows of the Worcester and the Berkshire societies, $150 each, and to purchase a Jersey bull for the State Reform institution at Westboro, $100; in 1855, for premiums at the exhibition of the United States Agricultural Society, held on the newly-filled

territory between South Bay and Harrison Avenue, $1,000, and the same year, to the Plymouth County society, for premiums, $125; in 1856, for premiums on dairy stock at an exhibition held at the same time with the annual cattle show of the Worcester County society, nearly $2,000; in 1857, for premiums at a State exhibition, the awards being made under the direction of the Board of Agriculture, $2,000; in 1858, as a subscription for the purchase, for the Natural History Society, of Dr. T. W. Harris's collection of insects in Massachusetts injurious to vegetation, $150; in 1861, to aid the Barnstable Agricultural Society, $200; in 1866, to aid the Botanical Garden of Harvard University, $500; in 1867, to pay the tuition fees of three deserving students at the State Agricultural College, $150.

Various pamphlets relating to agriculture were issued from time to time, and the expense of an agricultural survey of the counties of Middlesex and Essex, in 1858 and 1859, was met by the society. In 1858, premiums of $150 in each case were offered for the best essay on the comparative economy of the labor of horses and oxen; on the most desirable breed of neat cattle for this state, having regard for yield of milk, for work and for beef; on manures; and on agricultural education. In 1855 was begun a series of annual importations of different varieties of turnip and beet seeds, which continued for ten years. The lowest figure of value in any year was $104, and the highest $350. For two years the record is of weight only, viz.; 200 pounds each of yellow-globe mangold, long-red mangold, ruta baga and sugar beet, and the next year somewhat less than half the quantity. These seeds were distributed among the farmers of the state, gratuitously, principally through the Board of Agri-

culture and the Committee on Agriculture of the General Court.

Accordingly, at the date of the annual meeting of 1867, the members of the society could look back upon twenty-five years of very useful and very miscellaneous work; and, although they had to a great extent proceeded by quite different methods, they had no cause to feel that they had done less than their predecessors, of either of the two preceding like periods, in promoting agriculture.

The Percheron stallions, after being exhibited at Springfield in the autumn of 1867, were kept in the western part of the state for a year, and then returned to West Roxbury. In June, 1870, all the Percheron stock was sold by auction, excepting the stallion Murat and a filly. In November, 1871, Murat was sold. The general result of this importation of French horses was regarded with great satisfaction by the trustees; and during the following years favorable reports as to the practical value of the horses were heard, from time to time, derived from farmers and others who were using them. In 1875, the mare Empress, of this importation, was sold by her owner, with a cart and harness, at an auction sale, for $400; and the person who reported the fact to one of the trustees, said that the horse "never looked better."

In 1867 it was decided to import a small lot of Jersey cattle, and to make a conditional gift of them to the Farm School, an educational institution situated on Thompson's island, in Boston harbor. The expectation was that the herd, being thus isolated, would become of high reputation, as unquestionably pure-blood Jerseys. In the spring of 1868, Mr. Thomas Motley, first vice president of the society,

voyaged to Europe and visited the isle of Jersey, where he bought, for the society, a bull and three heifers, which, on arrival, were placed at Thompson's island. The cost altogether was about $1500. One of the conditions of the gift was that the bull calves should be the property of the society. Gifts of young bulls were subsequently made, one to the Sailors' Snug Harbor, one to the National Sailors' Home, and one to the Barnstable County Agricultural Society. One or two were sold. About the year 1873 the herd suffered a decline, and the society relinquished, for a while, any responsibility. Under a new method of management, a complete restoration was effected, so that in 1879 the trustees expressed, officially, their full satisfaction, and ordered an expenditure of $108 for a proper recording in the herd-book, and the putting up of posts, rings and chains in the place of stanchions, for the greater comfort of the animals.

In October, 1868, the subject of artificial propagation of food fishes was brought up in an essay by Theodore Lyman, the treasurer of the society, the argument, in part, being directed to a profitable use of brooks and ponds by farmers. At the December meeting, premiums of $300 and $200 were offered for the two best fish-breeding establishments for fresh-water fishes. There were six or seven competitors, and the award of the larger sum was made, in 1872, to Dexter, Bacon & Coolidge of West Barnstable, and the smaller to Walter Gilbert of Russell Mills, Plymouth. In 1869 action was taken preparatory to giving, in the autumn, a stock exhibition by the society, in Boston, in the building called the "Coliseum," a structrue erected for a musical festival held in the course of the summer; but the negotiations failed through a division of opinion, or of authority, among the owners of

the building, and the trustees reluctantly abandoned their project.

In 1870 Thomas Motley was chosen president of the society, in place of George W. Lyman, who resigned after a service in that office of 13 years. In 1870 a premium of $1,000 was paid to B. Perley Poore of Newbury for a plantation of forest trees. This premium was offered in 1857, the conditions, in part, being that the area must be at least five acres, the trees of a wood used in shipbuilding, with one white oak for every twenty square yards of ground, the award to be made in 1870. In April, 1871, the trustees ordered an importation of twelve English harrows, for use in loosening the surface of grass land and pastures, and breaking into fragments top-dressing, or other fertilizing material, thereupon. In August, an exhibition of the apparatus was made before the trustees, at a farm in Brookline, and it received, promptly, the official approval and recommendation. At the same meeting in August, a paper was read describing the appearance and habits of the potato bug, or Colorado beetle, and giving account of its ravages in some places, with suggestion of remedial measures. It was ordered to be printed and distributed at once for the information of farmers in this State.

In 1872 was received the amount of a bequest to the society by Francois Andre Michaux of Versailles, France, a net sum of $7,807.67. He was an eminent scientist who gave his attention chiefly to botany and related subjects. He visited this country first in 1785, with his father, Andre Michaux, who was of equal eminence as a botanist. His second visit was in 1801, when he carried to completion certain investigations and experiments which his father had begun. He came again in 1806 and made an exploration of the whole

Atlantic seaboard region, from Maine to Georgia, inclusive. Another sojourn occurred in 1816, at which time he was elected an honorary member of the Massachusetts Society for Promoting Agriculture. He received a like recognition from the American Philosophical Society of Philadelphia. In his will, made in 1852, he made bequests to both societies. He had previously written a letter to a friend in this country announcing a purpose so to do, and explains by saying: "I wish to give the American nation a testimonial of my gratitude for the hospitality and assistance my father and myself received in that country, during the course of our long and toilsome journeys." The Society's records give no intimation of the special form in which the attentions, for which he expresses gratitude, were bestowed. But the character of the work he was engaged in, and his superior qualifications as a man of science, could not have failed to commend him to those, who, at either date, held official or prominent position in the society. Doubtless he received many personal attentions, as well as the official one of election to honorary membership.

The result of his investigations in this country was published in different editions under the title of "Sylva Americana." A set of the final and perfected edition, of five illustrated volumes, was purchased by the society, and is a part of its library. By the terms of the will, the fund is applicable in experiments in producing new cereals in horticulture and arboriculture, and, especially, the cultivation of hardy forest trees, which the testator judged might profitably be grown on sterile or sandy land, or land encumbered with rocks or quagmires. In a general way, such undertakings had already received encouragement from the society, and so continued; but the legacy was greatly appre-

ciated, as permitting of expenditure, in these lines, with a more liberal hand.

In 1876 measures were taken to encourage the planting of forest trees, by enlarging the premium list and modifying the conditions, the premiums offered being $1,000, $600 and $400 for the best, and second and third best plantations, of not less than five acres. The trees were to be Scotch or Corsican pine, in Barnstable, Dukes and Nantucket counties, and European larch elsewhere in the State; to be grown on land not suitable for general agricultural purposes, and to have 2,700 trees per acre; also premiums of $600 and $400 were offered for five acre lots of white ash, not less than 5,000 to the acre.

It was also voted to reprint, for gratuitous distribution, an edition of 10,000 copies of the essay on forest-tree planting by Prof. Charles S. Sargent of Harvard College, a trustee of this society. This was originally published in the annual report of the Board of Agriculture, and was now issued with a new preface, written by the professor.

A plan of co-operation with Harvard College in making experiments, and giving instruction in agricultural chemistry, arboriculture and botany, as related to agriculture, was agreed upon soon after the college authorities established the Bussey Institute, and organized it with a corps of professors. About $2,500 per annum was applied in this way, during the ten years prior to 1880, the grant being, once or twice, as large as $3,500, and reduced to $1500 in other years; and a part of the expenditure each year was made at the Botanic Garden in Cambridge. The experiments were made to some extent under the direction or in conformity with suggestions of the trustees, and consisted in part of analyses of soils, and patented or

imported fertilizers. The State Agricultural College was also a beneficiary of the society during the same period, the gift being about $250, each year, for scholarships. Various other things helpful to agriculture were done, among which were the issuing of pamphlets, treating on new or otherwise pertinent topics; the donation of $500 as premiums at the exhibition of the Pomological Society in 1873, and $500 to the same in 1880; a gift of $200 to aid an ingenious student at the Agricultural College in perfecting his device for a steam plough; a gift of $500 to aid the Agassiz summer school at Pemikese island, a part of the instruction there given, having relation to agriculture; a gift of $250 for engraving plates to illustrate a treatise on the fungi of trees and plants, being the result of studies by one of the professors at the Bussey Institute; also for translating and printing an illustrated French work on tree pruning, for gratuitous distribution, $300; and for premiums at a butter show in Greenfield, in 1879, $100.

In 1874 the society made an importation of a bull and eight cows of Guernsey stock, for the purchase of which President Motley visited the isle of Guernsey. The bull was named in the American herd book the "Duke of Guernsey," thereby disusing the English herd-book name, though still permitting in the record the pedigree to be traced. A fine photograph of the animal was obtained, which continues to adorn the wall of the society's office, and attracts the attention and commands the admiration of visiting connoisseurs. The herd, on arrival, was placed in a suitable building on the Bussey Farm, the use of which was granted by the college authorities. Some extraordinary statistics of yield of milk and butter are contained in the society's records relating to this herd. The calves

were sold, from time to time, for $100 each. In 1875 the fame of the cattle being established throughout the State, and the adaptibility of the breed to the climate being assured, the herd was sold by auction, and a good distribution was made. The prices thus obtained, in general, were low as compared with the cost; but one cow was sold for $300, and a six months calf for $100.

In 1876 an importation of Berkshire and Essex swine was made. One of the trustees, Mr. E. F. Bowditch, visited Europe that season and made the purchases. The animals were placed at his celebrated farm in South Framingham. The enterprise proved very successful, and another importation was made in 1877, so that the collection aggregated at one time a hundred or more. In the year 1880 the sales from this stock amounted to $1,169.

In 1877 premiums were offered for the most successful experiments in converting salt marsh into arable land, by dyking and draining. A considerable degree of success attended, during certain years, the experiments made at Thompson's island and at Edgartown; but neither was judged to be so continuously prosperous as to warrant an award at the end of the term.

In 1878 the trustees authorized the reprinting of a book originally issued by the society in 1866, entitled, "High farming without manure." It was a translation of a French work written by M. George Viele, professor of vegetable physiology in the Museum of Natural History in Paris. In it he explains at length a series of experiments begun by him in 1860 with artificial manures, now commonly called "fertilizers." The experiments were based upon principles of chemistry; the tests were made upon adequate areas of farming land, and the results he obtained vindicated the scien-

tific theory which he had announced, as to vegetable processes and growth. All the compounds now commercially known as fertilizers, are prepared in a manner generally conformable to this theory. The society's large edition originally published was promptly taken up, and the re-issue was in response to a continued popular demand. It is doubtless to be regarded as an indirect consequence of M. Viele's announcements that in February, 1873, the trustees voted to import from Germany, for distribution among Massachusetts farmers, six tons of chemical manures. Samples of these were analyzed subsequently for the society, by Prof. Francis H. Storer of the Bussey Institute. Of like significance is the shipment, in April, 1873, as a gift to the society from John Bennett Lawes of Rotherham, Eng., of three tons of super-phosphate.

In 1882 the society entered upon another series of importations of live stock. At the beginning of the year, action was taken preparatory to the purchase abroad of not exceeding six stallions of the Percheron breed. In April, when President Motley was about to visit Europe, the board desired him to make the purchase. In July, a letter was received from him, saying that the demand had been such, and so many recent exportations had been made, that it was doubtful if a good selection could be made at satisfactory prices. A cable reply was sent authorizing the purchase, at his discretion, of five stallions, at not exceeding $1,500 each. These were bought, and on arrival were sent to Mr. Bowditch's farm in South Framingham. They bore the names of Nelluscot, Brilliant, Mercury, Marseilles and Magot. Within a short time they were sent to different parts of the State, and were kept as the society's property until 1888, when they were sold

by auction in Boston. During several years, premiums of $100, $75 and $50 were paid for the best yearling colts of their progeny.

Early in 1882 action was taken for the importation of rams of superior breeds. These consisted of twelve Southdowns, eight Cotswolds, eight Shropshires, six Hampshires, two Oxford Downs and one of the Lincoln breed. Their first distribution was by loan to farmers, in different parts of the State; but in 1883, they were re-assembled and sold, by auction, to farmers in the towns of Chester, Mendon, South Deerfield, Ipswich, Medfield, Sutton, Hudson, Hubbardston, Worcester, Middlefield, Middleboro, Hopkinton, Sterling, Shelborne, New Braintree, Enfield, West Bridgewater, Barre, Newbury, Brockton, Holliston, Palmer, Holyoke, Leicester, Cohasset, Egremont, Wales and Marshfield. Although the proceeds of the sale amounted to but about half the cost of the animals, the official report on the matter expresses satisfaction, saying that the object of the society had been accomplished, in having them well scattered throughout the State. In July, 1883, an importation of ninety-nine ewes of favored breeds was made, at a cost of nearly $5,000, and for these, by auction sale, a like distribution was obtained.

In October, 1882, the board was informed by one of its memebrs that the authorities of Harvard University had taken measures to establish a veterinary school, and had already appointed a professor for that department. This was a realization of what had been recommended thirty-eight years before, in a report made to the trustees by Dr. J. C. Warren, which has already been alluded to. At that time the plan of an organized school was recognized, in the report, as not practicable financially. The trustees now voted

$5,000 to aid the new department of the university. Some conditions were attached, which circumstances made it difficult to carry into effect, and after negotiation and a comparison of views, the sum of $2,000 was granted, unconditionally, payable "whenever an arrangement satisfactory to the college has been made for an establishment."

In February, 1885, a contagious disease having appeared, known as "hog-cholera" or "swine-fever," a committee of trustees was appointed to call the official attention of the Executive of the State to the situation. Governor Ames responded in a special message to the Legislature, and an act was promptly passed to provide authority and means to exterminate the disease. The act was general and covered any contagious disease which existed, or might appear, among domestic animals, and provided a penalty for a wilful suppression or withholding of information of the presence of such diseases.

In 1887 a premium of $1,000 was awarded and paid to J. D. W. French, of North Andover, for a plantation of larch trees, raised by him, in conformity with the terms of the society's premium offers of 1876. The official report of the matter says that the trees were European larches, about 15,000 in number; as originally planted. They were set to cover an area of five acres, about four feet apart, excepting along the boundaries of the field, where they were placed nearer together. The land was a steep slope, facing to the south, covered with a thin coating of gravelly loam, mixed, towards the bottom of the hill, with light sand. It was of no value for tillage, but had been used for pasturage, though of little worth for that, having but the scantiest growth of native sedges and grasses. During the ten years some of the trees died, so that

the space was not covered with equal density; but, as was estimated, from 10,000 to 12,000 thrifty trees were then upon the ground. They were not of equal height throughout, the highest tree being twenty-five feet, and measuring at the butt twenty-six inches in circumference; but those spoken of as the smallest averaged twelve feet height, with trunks of ten or twelve inches circumference. Others appeared which were of spontaneous growth, among them white pines, six or eight feet high, pitch-pines, fourteen feet high, a white oak, fifteen feet high, and a gray birch, seventeen feet high.

The cost up to 1887, including purchase and importation, labor, fencing, surveying and compound interest at five per cent., had been, $390.90. The committee remarked that the experiment showed distinctly that the European larch can be grown cheaply on very poor soil, but did not show that native trees will not do as well, instancing the white pine.

In 1886 a society having been incorporated as the Bay State Agricultural Society, the trustees of the Massachusetts Society voted to give it financial support in holding a stock exhibition in Boston. The vote was of a two-fold character, providing a guaranty fund of $10,000 and a gift outright of $2,500, to be applied in premiums in the name of the Massachusetts Society. The effect of the guaranty was to give the new institution immediate financial credit. The public response, in the purchase of tickets of admission to the exhibition, was generous, and the enterprise yielded a profit, so that the guaranty fund was not drawn upon. There was no competition for one or two of the society's premiums, and the expenditure under that head was but $2,200. Certain members of the board of trustees

were also members of the executive board of the Bay State Society.

The exhibition was held in the spacious building of the Charitable Mechanics' Association, on Huntington Avenue, beginning on Wednesday, October 6, and closing on Saturday evening following. The situation was an ideal one, in some respects, as adequate ventilation and a proper temperature could be constantly maintained; and so the choice and valuable animals escaped such discomforts as those, which may be called their predecessors, were liable to, on the bleak hillsides of Brighton. In the evening the interior of the building was lighted by electric lamps. The number of spectators was constantly large. On one day the attendance was estimated to be 23,000, an accurate enumeration not being possible, as many were admitted by season tickets. The figures, taking the four days into account, are indicative of the increase of population and travelling facilities in sixty years, when compared with the attendance of 4,000, which made a great day for Brighton; and, considering that no admission fee was then asked, they prove, at least, no diminution of popular interest in things agricultural.

The exhibition comprised: Neat cattle, 609; horses, 174; sheep, 285; swine, 161; coops of poultry, 745; entries of machines, implements, vegetables, fruits, dairy products, etc., 4,404. It was unrestricted as to territory, and the agriculture of each of the New England states, and New York state, was represented. In 1888 the Bay State Society gave an exhibition at Springfield, which was not guaranteed by the Massachusetts Society, though $1,500 in premiums was granted by the latter. In 1889 another exhibition, with guaranty, was given in the Huntington Avenue building, which was substantially a repetition of that

of 1886, and at which the full sum of $2,500 was paid by the Massachusetts Society in premiums, the trustees of that Society being again represented on the board of directors.

In 1884 the trustees reprinted for gratuitous circulation a small volume entitled "the legal rights and liabilities of farmers." Its author was Edmund H. Bennett, LLD., dean of the Boston University School of Law. In style it was familiar and concise. It was generally appreciated by those for whose reading it was intended, and the edition was soon exhausted. In it the main points of common and statute law were presented, as applicable to bargaining for a farm, to farm boundaries, the hiring of help, rights in the public road, rights of way over farm lands, railroad rights of way, farm fences, impounding cattle, injuries to and by farm animals, injuries by dogs, farmers' liabilities for the acts of their hired men, fires in the fields and woods, drainage and flowage rights, trespassing, overhanging trees, lightning-rod agents and peddlers of patents.

In May, 1884, the trustees granted the sum of $300 in aid of certain experiments to be conducted by Desmond Fitzgerald, superintendent of the western division of the Boston Water Works. The experiments were designed to ascertain the scientific facts and natural laws of evaporation, in out-door situations, and had primary reference to the conditions of water supply. To this end they were conducted upon an ample scale; and among the tests applied, were such as would denote the relative evaporation of cleared surfaces of land, and those which are covered with forest. This latter inquiry was divided into separate observations of forests of evergreen, and those of deciduous trees. Contemporary records were

kept in each case. The outcome of such an investigation would manifestly be of instructive interest to all engaged in problems of practical agriculture, and might disclose facts or laws, a knowledge of which would be of great value to the farmer, and of immediate applicability. The experiments were encouraged by the trustees, by making additional grants of $200 in the latter part of 1884, and $100 in 1889. The best apparatus was obtained, and the observations were continued through five years, together with meteorological observations requisite for comparison. The labor of tabulating and collating the facts for adequate scientific deduction, has not yet been completed, but is in progress.

On November 8, 1889, the trustees took action for an investigation of the gipsy moth, a destructive insect which had appeared in West Medford, and $225 was voted for printing and distributing in the farming districts, bulletins descriptive of the moth and its habits. Nothing farther was done, it being announced at the next meeting of the trustees, that the State authorities had begun operations for the suppression of the pest.

Among the minor transactions of the society during the closing ten years of the century, are the advocacy, before committees of the Legislature, of statutes, which eventually were enacted, exempting from taxation for a term of years, new plantations of forest trees, and to prevent the destruction of forests by fires kindled through carelessness or otherwise; the payment during five years, prior to August 31, 1887, of $1,000, annually, to aid the department of the herbarium at the Bussey Institute; in 1884 the sum of $300 to Prof. William G. Farlow, of the Institute, for engravings to illustrate a treatise on rust in grain and

grasses; in 1882 the sum which had been usual for several years, for scholarships at the State Agricultural College; in 1883, for engravings, and printing a treatise on the pine moth of Nantucket, $237; in 1886, for certain experiments designed to destroy potato bugs, $100; in 1887, for premiums for the exhibition of the Massachusetts Poultry Association, $300; in 1888, in aid of the United States agricultural exhibit at the Exposition in Paris, by a display of plates published in Michaux works, $100; in 1889, for premiums for the Boston Horse Show, $150, and in the same year, for an insectory at the State Agricultural College, $200; in 1890, for premiums at the Massachusetts Poultry Association's exhibition, $200; and in 1891, for preparatory measures for a Dairy Exhibit from New England at the World's Fair, to take place at Chicago, $175.

In 1886 an investigation was begun, under the auspices of the society, of certain diseases of milch cows, more especially that known as tuberculosis. In 1887 a farm in West Roxbury was leased, which is called in the society's records, the Experiment Farm. A considerable number of diseased animals were procured, enough to represent the several noticeable stages of the progress or development of the disease. The chief immediate purpose of the investigation was to ascertain whether the milk of tuberculous cows was so infected by germs of the disease as to be a possible, or probable, means of spreading the disease among human beings, both when the animals were diseased in the udder, and elsewhere. Incidentally the phenomena of the disease, as a matter of scientific inquiry, and methods of cure, were taken into consideration. A number of calves of healthy animals were purchased, and these were fed with the milk of diseased cows, and

the consequences noted. Experiments by inoculation were also made. Rabbits and guinea pigs were treated in like manner. During the first season, the undertaking was in sole charge, as regards the scientific part of it, of Dr. Austin Peters, a veterinarian of the first reputation, and in 1888 Dr. Harold C. Ernst, of the Harvard College medical school, was appointed as bacteriologist to the society. The experiments with animals ceased on July 1, 1890, and the laboratory experiments on January 1, 1891. The total cost to the society at that time had been $22,124.12. The results were ultimately published in a report, but the first use made of them was to bring the facts ascertained to the attention of a committee of the Legislature of the year 1891. These facts were confirmatory of opinions held by many medical men in this country and in Europe, that the germs of tuberculosis are conveyed by the milk of cows into the human system, and retain their vitality, and so cause, in part, prevalent tuberculosis diseases in the community. Evidence was given to show that the bacillii (germs of the disease) in cows diseased, only elsewhere than in the udder, were liable to find their way into the milk product. The legislation desired was not obtained at that session, but the effect has been manifest in a report to the present Legislature, from the Board of Agriculture, and in other places.

The various items of expenditure which have been given in the foregoing pages have been intended only to indicate in a general way, the direction of the society's efforts at different periods, and the magnitude of certain enterprises undertaken by its trustees or agents, or by others acting for the time under its supervision or patronage. The figures fall far short of the total outlay in the society's field of activity,

regarded as a whole, and, in many instances, in the particular enterprises. The cost of importations of live stock, for example, has always been enhanced by expenses for keeping, through periods of various length. Much in printing and distributing circulars and small pamphlets has been done, of which no mention is here made. The total cost of the advertising in newspapers of matters directly concerning farmers' interests, during the century, could it be ascertained, would be a surprising sum. What has been set forth of a financial character has related almost wholly to the expenditures of the society. In the early history of the society, a considerable revenue was derived from annual fees. This in time, through decrease of the membership, and by the substitution of a specific admission fee in place of an annual fee, was diminished to a small sum. At the beginning of the civil war, as already stated, the society declined the annual bounty of the State, and ever since, at its own option, it has refrained from making any draft on the State treasury. Certain bequests and gifts, the more important of which have been mentioned, came to the society from time to time. No money has ever been paid as salary to any of its officers, nor for entertainment of members or guests. Such hospitalities as have been offered have been at the personal cost of the hosts of the several occasions. The society's financial prosperity has been largely the consequence of a careful management of the permanent funds, by restricting the expenditure of the current year to the income of that year; and a reservation, as circumstances allowed, of a portion of the income, to be added to the permanent funds.

NOTE.

In the statement on page 54, as to the Freeborn plough, it is intimated that Freeborn was a maker not a designer of ploughs, and his plough is identified with that of Jefferson through the use of the phrase, "spiral wind." Since the manuscript was given to the printer, the writer has seen a New York City advertisement of the year 1819, in which the Freeborn plough is distinctly described as a "cast-iron plough" and of "Wood's patent." This is proof that the Freeborn plough was of the Jeffersonian model.

OFFICERS OF THE SOCIETY,

1792-1892

PRESIDENTS.

Thomas Russell	1792 to 1796
John Lowell	1796 to 1802
Caleb Strong	1802 to 1805
John Adams	1805 to 1813
Aaron Dexter	1813 to 1823
John Lowell	1823 to 1828
Thomas L. Winthrop	1828 to 1841
John Welles	1941 to 1846
John C. Gray	1846 to 1857
George W. Lyman	1857 to 1870
Thomas Motley	1870—

FIRST VICE PRESIDENTS.

John Lowell	1792 to 1796
Moses Gill	1796 to 1800
Joseph Russell	1800 to 1807
Aaron Dexter	1807 to 1813
Samuel W. Pomeroy	1813 to 1823
Thomas L. Winthrop	1823 to 1828
Israel Thorndike	1828 to 1829
Peter C. Brooks	1829 to 1835

John Welles	1835 to 1841
Peter C. Brooks	1841 to 1846
Daniel Webster	1846 to 1853
Francis C. Lowell	1853 to 1855
William P. Mason	1855 to 1856
George W. Lyman	1856 to 1857
Charles G. Loring	1857 to 1860
Thomas Motley, Jr.	1860 to 1870
David Sears, Jr.	1870 to 1873
Leverett Saltonstall	1873—

HONORARY FIRST VICE PRESIDENT.

Theodore Lyman	1888—

SECOND VICE PRESIDENTS

Moses Gill	1792 to 1796
Joseph Russell	1796 to 1800
Aaron Dexter	1800 to 1807
Theodore Lyman	1807 to 1809
Samuel W. Pomeroy	1809 to 1813
Thomas L. Winthrop	1813 to 1823
Israel Thorndike	1823 to 1828
Thomas H. Perkins	1828 to 1829
John Welles	1829 to 1835
Peter C. Brooks	1835 to 1841
William Prescott	1841 to 1844
John C. Gray	1844 to 1845
Abbott Lawrence	1845 to 1850
J. C. Warren	1850 to 1853
William P. Mason	1853 to 1855
George W. Lyman	1855 to 1856
Charles G. Loring	1856 to 1857
Robert C. Winthrop	1857 to 1859
Thomas Motley, Jr.	1859 to 1860

James W. Paige	1860 to 1866
David Sears, Jr.	1866 to 1870
Amos A. Lawrence	1870 to 1871
Leverett Saltonstall	1871 to 1873
Amos A. Lawrence	1873 to 1875
Theodore Lyman	1875 to 1888
Henry Saltonstall	1888—

RECORDING SECRETARIES.

John Avery, Jr.	1792 to 1806
Dudley Atkins Tyng	1806 to 1809
John Thornton Kirkland	1809 to 1811
Richard Sullivan	1811 to 1823
Gorham Parsons	1823 to 1833
John C. Gray	1833 to 1839
Josiah Quincy, Jr.	1839 to 1844
Abbot Lawrence	1844 to 1846
Elias Phinney	1846 to 1850
Francis C. Lowell	1850 to 1853
George W. Lyman	1853 to 1855
Robert C. Winthrop	1855 to 1856
Richard S. Fay	1856 to 1860
Peter C. Brooks, Jr.	1860 to 1871
Edward N. Perkins	1871 to 1882
E. F. Bowditch	1882 to 1892
Francis H. Appleton	1892—

ASSISTANT RECORDING SECRETARY

Benjamin Guild	1818 to 1857

CORRESPONDING SECRETARIES.

Oliver Smith	1792 to 1797
Jonathan Mason, Jr.	1797 to 1798

John Thornton Kirkland	1798 to 1802
Dr. Samuel Parker	1802 to 1805
John Thornton Kirkland	1805 to 1806
John Lowell	1806 to 1823
Richard Sullivan	1823 to 1828
John Lowell	1828 to 1830
Richard Sullivan	1830 to 1835
John Heard, Jr.	1835 to 1839
John C. Gray	1839 to 1844
Josiah Quincy, Jr.	1844 to 1853
Charles G. Loring	1853 to 1855
James W. Paige	1855 to 1860
Richard S. Fay	1860 to 1866
Leverett Saltonstall	1866 to 1871
Benjamin S. Rotch	1871 to 1875
William R. Robeson	1875 to 1879
Charles S. Sargent	1879—

TREASURERS.

Aaron Dexter	1792 to 1800
Thomas L. Winthrop	1800 to 1813
John Prince	1813 to 1827
John Heard, Jr.	1827 to 1835
Henry Codman	1835 to 1850
Thomas Motley, Jr.	1850 to 1859
David Sears, Jr.	1859 to 1866
Theodore Lyman	1866 to 1872
Henry Saltonstall	1872 to 1880
Jacob C. Rogers	1880—

LIBRARIAN.

Francis H. Appleton	1884—

TRUSTEES.

Thomas Russell	1792 to 1796
John Lowell	1792 to 1802
Moses Gill	1792 to 1800
John Avery, Jr.	1792 to 1806
Oliver Smith	1792 to 1797
Cotton Tufts	1792 to 1793
Laommi Baldwin	1792 to 1796
James Bowdoin	1792 to 1796
Christopher Gore	1792 to 1796
Charles Vaughan	1792 to 1799
Martin Brimmer	1792 to 1805
Aaron Dexter	1793 to 1827
Samuel Barker	1793 to 1804
Joseph Russell	1796 to 1807
George Cabot	1796 to 1805
John Codman	1796 to 1809
Theodore Lyman	1796 to 1800
Jonathan Mason	1797 to 1798
John Thornton Kirkland	1798 to 1811
Thomas L. Winthrop	1799 to 1841
Fisher Ames	1800 to 1804
John Warren	1800 to 1810
Caleb Strong	1802 to 1805
Christopher Gore	1804 to 1806
Samuel W. Pomeroy	1804 to 1823
John Adams	1805 to 1813
Dudley Atkins Tyng	1805 to 1816
Josiah Quincy	1805 to 1809
William Emerson	1806 to 1810
John Lowell	1806 to 1830
Ebenezer Preble	1807 to 1817
Peter C. Brooks	1809 to 1846
Samuel G. Perkins	1809 to 1815

J. S. Buckminster	1810 to 1811
John Prince	1810 to 1828
Richard Sullivan	1811 to 1835
Gorham Parsons	1811 to 1833
Josiah Quincy	1813 to 1826
Edward A. Newton	1815 to 1816
Elias H. Derby	1816 to 1841
Samuel G. Perkins	1816 to 1824
Nathaniel Ingersol	1817 to 1818
John Welles	1818 to 1846
Israel Thorndike	1823 to 1837
William Prescott	1824 to 1844
Jonathan Amory	1826 to 1827
John Heard, Jr.	1827 to 1839
John C. Gray	1827 to 1857
Thomas H. Perkins	1828 to 1829
James Jackson	1829 to 1831
Benjamin Gorham	1830 to 1831
John Lowell	1831 to 1834
Samuel G. Perkins	1831 to 1832
John Prince	1832 to 1833
Daniel Webster	1833 to 1853
Henry Codman	1833 to 1850
Josiah Quincy, Jr.	1834 to 1853
Abbot Lawrence	1835 to 1850
Elias Phinney	1837 to 1850
John C. Warren	1839 to 1853
Francis C. Lowell	1841 to 1855
Levi Lincoln	1841 to 1842
John A. Lowell	1842 to 1844
David Sears	1844 to 1850
William P. Mason	1844 to 1856
Daniel P. King	1846 to 1850
Thomas Motley	1846 to 1847
George W. Lyman	1847 to 1870

Charles G. Loring	1850 to 1860
Edward Everett	1850 to 1855
Thomas Motley, Jr.	1850—
Robert C. Winthrop	1850 to 1862
Samuel Lawrence	1850 to 1858
James Brown	1853 to 1855
Josiah Quincy, Jr.	1839 to 1844
Abbott Lawrence	1844 to 1846
Elias Phinney	1846 to 1850
Francis C. Lowell	1850 to 1853
George Peabody	1853 to 1864
James W. Paige	1853 to 1867
Richard S. Fay	1855 to 1866
Stephen Salisbury	1855 to 1860
William S. Lincoln	1855 to 1861
George T. Bigelow	1856 to 1864
David Sears, Jr.	1857 to 1873
George B. Loring	1858 to 1863
Peter C. Brooks, Jr.	1860 to 1871
Martin Brimmer	1860 to 1868
William B. Bacon	1861 to 1863
Leverett Saltonstall	1862—
William G. Prescott	1863 to 1865
Amos A. Lawrence	1863 to 1875
Edward N. Perkins	1864 to 1883
E. R. Andrews	1864 to 1866
Benjamin S. Rotch	1865 to 1877
George M. Dexter	1866 to 1873
Theodore Lyman	1866 to 1888
Henry Saltonstall	1867—
John Quincy Adams	1868 to 1869
William R. Robeson	1869 to 1879
John G. Cushing	1870 to 1882
Charles S. Sargent	1871—
Henry S. Russell	1873—

E. F. Bowditch	1873 to 1892
John Lowell	1875—
John Quincy Adams	1877 to 1887
Jacob C. Rogers	1879—
Frederick L. Ames	1882—
Francis H. Appleton	1883—
Augustus Hemenway	1887—
S. Endicott Peabody	1888—
Walter Cutting	1892—